Essential Water

Response to IPART's Draft Report of Prices for Water and Sewerage Services to Broken Hill and surrounding areas

April 2014

Public version – commercial in confidence information redacted

Table of contents

1	INTRODUCTION	3
2	EXECUTIVE SUMMARY	4
3	OPERATING EXPENDITURE	6
4	CAPITAL EXENDITURE	11
5	RETURN ON ASSETS	15
6	PRICES	18
7	MINES PRICES	19
8	CONSUMPTION RISK	21
9	FINANCEABILITY	22
10	APPENDIX	27

1 INTRODUCTION

1.1 Basis for Submission

This Submission has been prepared by Essential Energy in response to the Independent Pricing and Regulatory Tribunal's (IPART's) *Draft Report - Essential Energy's water and sewerage services in Broken Hill: review of prices from 1 July 2014 to 30 June 2018*, which was issued on 10 March 2014.

1.2 Real and nominal dollars

Nominal dollars represent the value of a dollar in a particular year - so a nominal dollar in 2014 would be worth less than a nominal dollar in 2017, due to the impact of consumer price index (CPI) increases. As CPI increases year on year, the impact becomes larger and larger over time. This is particularly evident when comparing what a dollar could buy, say 20 years ago, to what a dollar can buy today. The same logic applies when forecasting financials into the future. It would be unrealistic to assume that a dollar's worth of labour today would cost the same amount in five years' time.

To adjust for this change in value, it can be useful to convert the dollars of past and future years to the real dollars of a specified year. This makes the dollars truly comparable over time.

IPART has requested that historical operating and capital cost data in this Submission be shown in nominal dollars and all operating and capital cost forecasts for the next regulatory period be shown in real 2013-14 dollars. This means the historical data will agree with the actual reported information provided to IPART each year, and the forecasts can all be compared in today's dollar values.

The IPART approved amounts in the last Submission were all in real 2009/10 dollars. To compare these with Essential Water's actual performance, the real 2009/10 dollars have been converted to nominal dollars of the relevant year. The CPI rates used to convert real 2009/10 dollars from the prior determination to nominal dollars are shown in Table 1-1. These rates are the IPART approved CPI rates for Essential Water.

Table 1-1 – CPI rates used to convert Real 2009/10 dollars to Nominal dollars

Financial year	2009/10	2010/11	2011/12	2012/13
IPART approved CPI rate	n/a	2.89%	3.33%	1.58%
Cumulative conversion rate	100%	102.89%	106.32%	108.00%

An approved 2009/10 dollar amount for spend in the 2010/11 year will require multiplication by 102.89 per cent, 2011/12 spend will require multiplication by 106.32 per cent and so on.

1.3 Contact details

Inquiries regarding this Submission can be directed to:

Manager Network Regulation

Essential Energy

PO Box 5730, Port Macquarie NSW 2444

Telephone 02 6589 8419

Facsimile 02 6214 9860

2 EXECUTIVE SUMMARY

Following due consideration, Essential Water does not support the Independent Pricing and Regulatory Tribunal's (IPART's) *Draft Report - Essential Energy's Water and Sewerage Services in Broken Hill: Review of Prices from 1 July 2014 to 30 June 2018* (the Draft Report) issued on 10 March 2014, on the basis that it fails to allow continuation of effective, efficient, compliant operations and existing customer service levels.

Essential Water's *Submission to IPART's Review of Prices for Water and Sewerage Services to Broken Hill and surrounds - September 2013* (the Submission) proposed:

- average operating costs of $14.1 million per annum, a decline in real terms compared to the current regulatory period
- anticipated future wage and other input price rises to be offset by productivity and efficiency gains
- a reduction of 7 full time employee equivalents (FTEs) between 1 July 2013 and 30 June 2018
- a $52.2 million investment in prudent, prioritised critical infrastructure projects
- a Weighted Average Cost of Capital (WACC) of 5.9 per cent, based on an inflation rate of 2.5 per cent (as advised by IPART)
- no changes to the existing tariff structures
- annual price increases of 5.9 per cent, excluding CPI, to cover operating and capital investment costs
- cost reflective mines pricing, with a tariff structure that minimises consumption risk for other customers.

Essential Water's Submission would ensure an ongoing cycle of infrastructure maintenance and renewal that will maintain existing customer service delivery levels.

IPART's Draft Report proposes:

- progressive reductions in operating expenditure to a 2017/18 allowance that is 15 per cent lower than 2013/14 expenditure, driven predominantly by improving productivity by 1 per cent per annum
- a deferment of most projects, with associated capital expenditure reduction of $9.4 million
- a further 10 per cent capital expenditure reduction of $4.3 million to reflect efficiencies determined to be gained through improved asset management practices, resulting in overall reduction in capital expenditure that is 26 per cent lower than Essential Water proposed in its Submission to IPART
- a Weighted Average Cost of Capital (WACC) of 4.9 per cent, based on an inflation rate of 2.8 per cent (even though a rate of 2.5 per cent has been applied throughout the remainder of the modelling)
- removing the second tier component from price structures – effectively transforming all tariffs to a fixed charge plus a single rate consumption charge – and increasing the fixed component to compensate for the removal of the second tier price
- mines pricing that increases consumption risk for other customers.

IPART considered that its Draft Report would allow Essential Water to maintain its current service levels to customers. However, when the effects of inflation are excluded, IPART has determined an average annual increase of 0.1 per cent over the four years to 2017/18 – substantially below Essential Water's proposed increase of 5.9 per cent per annum.

IPART's Draft Determination fails to provide sufficient revenue to operate and maintain Essential Water's assets and undertake necessary capital investment to sustain those assets. IPART has also introduced further revenue risks through draft determinations on tariff structures, Mines pricing and Demand Volatility Adjustments.

Given all of these circumstances Essential Water must give priority to the funding of safe and efficient operations and maintenance of water and sewerage services for the people of Broken Hill and surrounding areas. The significantly reduced capital program proposed by IPART could not be funded from remaining allowable revenue leading inevitably to an inefficient "fix when fail" asset management system for the future. Real operating costs are expected to increase progressively under this scenario.

Essential Water does not support IPART's Draft Report and recommends a further review by IPART to provide a determination that will allow delivery of a reasonable and sustainable level of water and sewerage services to the people of Broken Hill and surrounding areas

3 OPERATING EXPENDITURE

Principle components of Essential Water's operating expenditure include pumping costs, water treatment chemicals, emergency and planned maintenance activities, salaries and wages, property, fleet and IT costs. This section provides the following:

- section 3.1 provides key highlights of Essential Water's Submission
- section 3.2 provides an overview of IPART's Draft Report
- section 3.3 provides Essential Water's assessment and response to the Draft Report.

3.1 Essential Water Submission

Essential Water's Submission included forecast operating expenditure that would allow provision of services that meet quality, reliability and service levels required by customers and regulatory bodies in a prudent and efficient manner.

The operating expenditure forecast declines in real terms over the next regulatory period, despite anticipated future wage and other input price rises. Real increases in wages and input prices were not forecast within the Submission – instead, a commitment was made to offset real wage and input price rises by productivity and efficiency gains.

Factoring in real wage and input price rises when discussing operating cost reductions means that Essential Water committed to:

- operating expenditure savings of around $6 million for the next regulatory period compared to 2013/14 levels
- maintaining corporate overhead at 20 per cent to support existing customer service levels
- productivity improvements of 10 per cent, related to a reduction of 7 FTEs combined with zero real cost escalators, including labour. Expected operational expenditure reductions from new capital infrastructure have been included to assist in finding these real savings.

3.2 IPART Draft Report

IPART assessed Essential Water's forecast operating expenditure for the next regulatory period. IPART considered the information Essential Water included in its Submission. IPART also engaged Sinclair Knight Merz (SKM) to provide an independent review of the efficiency of Essential Water's forecast operating costs.

After considering Essential Water's proposed operating expenditure forecast and review by SKM, IPART in its Draft Report determined that operating expenditure be reduced in the order of $2.3 million by 2017/18 when compared to 2013/14, driven by the following adjustments:

- a corporate overhead rate of 18 per cent, 2 per cent below that proposed by Essential Water
- a general productivity target of 1 per cent per annum applied to both water and sewerage operations
- a reduction in maintenance costs as a result of Essential Water's proposed capital projects.

As shown in Figure 3.1, the differential between Essential Water's operating expenditure without productivity and efficiency improvements and IPARTs Draft Report is significant. Key points to note include:

- productivity and efficiency improvements of around $6 million were included in Essential Water's Submission

- applying the Draft Report and accounting for transfer of overhead and direct costs between capital expenditure and operating expenditure requires Essential Water to further remove an additional $6.5 million of operating expenditure
- combining savings proposed by Essential Water and further reductions proposed by IPART in its Draft Report means that Essential Water must remove $12.5 million in operating expenditure during the next regulatory period – the equivalent of 22 FTEs.

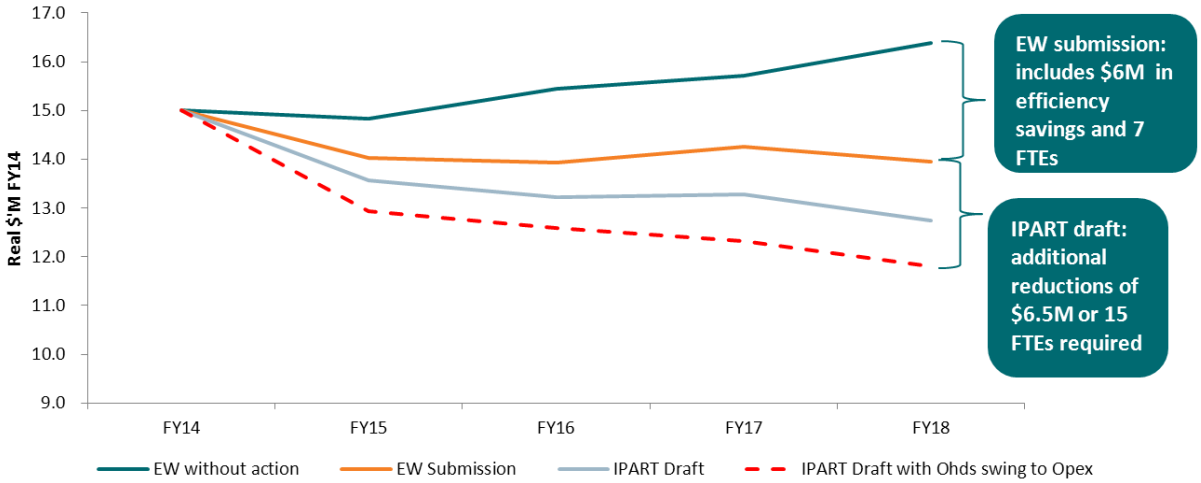

Figure 3-1 – Opex cost challenge: Reduce costs by $12.5M or 22 FTEs by FY18

Explanatory notes:
EE without action is based on the FY14 forecast with real labour escalators and does not include the forecast 7 FTE reductions from July 2013.
EE Submission includes the reduction of 7 FTEs over the next regulatory period and no real labour or other escalators, as submitted to IPART.
IPART Draft indicates further productivity, corporate overhead and maintenance cost reductions.
IPART Draft with Overheads swing to Opex assumes that corporate overheads and some other direct costs that have been allocated to capital projects will flow back into operational expenditure as a result the reduced capital allowance as these costs do not simply disappear and will have to be managed out of the business.

3.3 Essential Water response

Essential Water has extremely limited ability to reduce expenditure on critical materials costs such as water treatment chemicals and water pumping energy supplies (electricity and diesel) without compromising environmental and public health compliance obligations and customer service levels.

In these circumstances, the reductions imposed within the Draft Report can only be achieved through workforce reductions. This is not operationally and economically prudent or sustainable.

Workforce impacts

Figure 3.2 represents Essential Water's operating expenditure categorised into labour and other costs. Labour accounts for about 60 per cent of all operational costs. Other costs include inputs such as electricity for pumping water and sewer, chemicals for treatment and fleet. These other costs are critical to maintaining a reliable and quality supply of water and sewerage services. These are also relatively fixed costs of doing business, and savings are extremely difficult to find.

Given that Essential Water assumed no real cost escalation for labour or input costs in its operating expenditure forecast, there is no headroom for any potential real increases in these costs over the next four years. The cost reductions imposed within the Draft Report could only be achieved through reductions to the workforce.

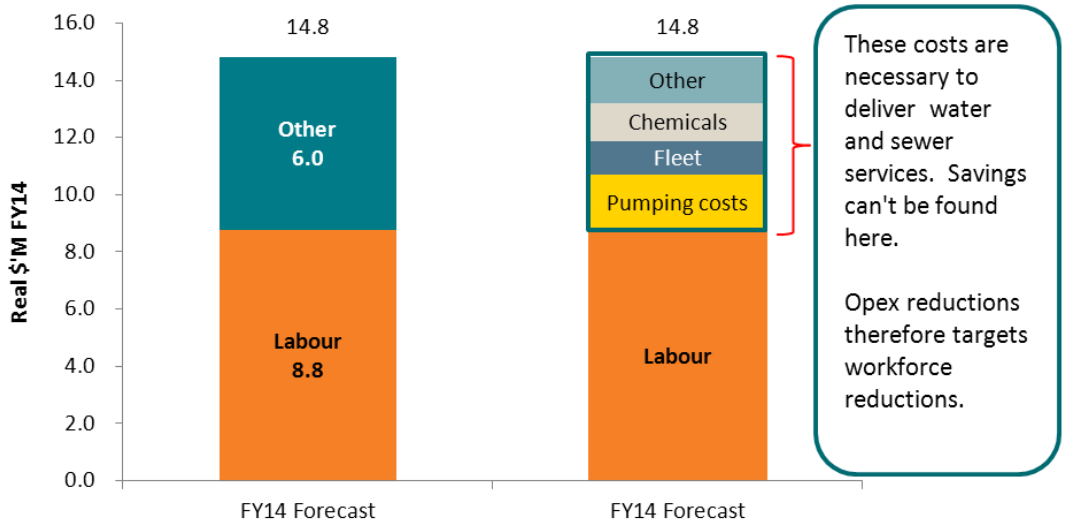

Figure 3-2 – Cost reductions will mean workforce reductions, as other costs are 'fixed'

In its Submission to IPART, Essential Water included a reduction of 7 FTEs, from June 2013 levels and also proposed holding real wage increases flat over the next regulatory period. This would provide both direct operational cost savings and associated plant and materials cost savings, while maintaining employee numbers at a sustainable level.

IPART's proposed reductions in operational expenditure and other direct capital cost could require a reduction of up to an additional 15 FTEs – a combined loss of approximately 22 FTEs, or 28 per cent of the current workforce, by 2018. Figure 3.3 demonstrates the workforce impacts implied within Essential water's submission and the Draft Report during the course of the next regulatory period.

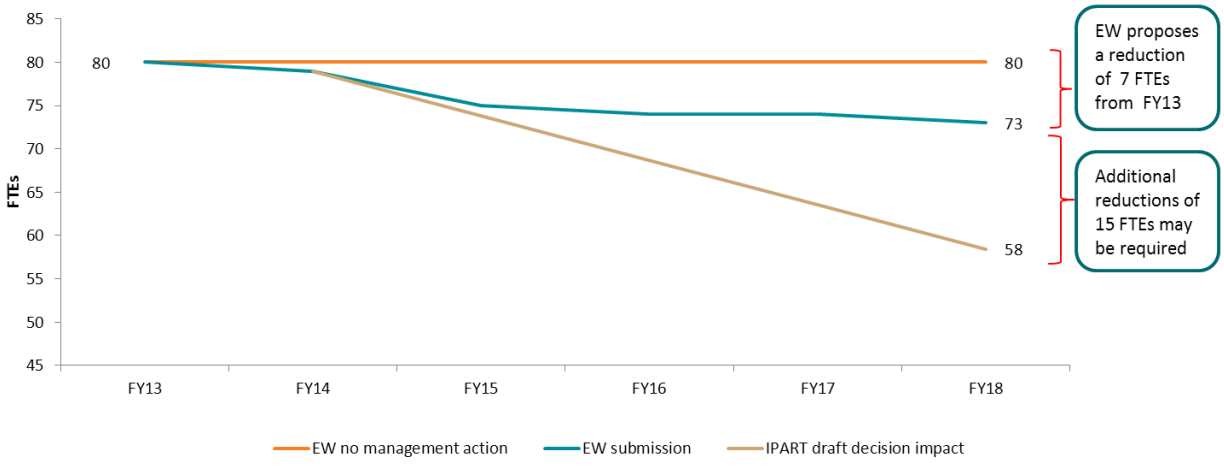

Figure 3-3 - Potential workforce reductions

The sustainability of Essential Water's workforce will also be jeopardised if the Draft Report operating expenditure allowances are adopted. The average age of Essential Water employees is currently 46. Under the Draft Report, cadetship and apprenticeship programs – which currently support succession planning by providing necessary incentives to train and work in Broken Hill and surrounding areas and other remote Far West locations – cannot be funded. This would impact future workforce sustainability.

It is also important to note that asset management resources are already limited within Essential Water and these resources would need to further reduce to meet IPART's proposed operating expenditure reduction. This will effectively prevent Essential Water from delivering IPART's proposed additional 10 per cent capital efficiency improvement, which is to be achieved through improved asset management delivery.

Futher pressure on operating expenditure is likely to eventuate due to the NSW Far West region returning to dry conditions. This is discussed further below.

Environmental impacts

IPART appears to have benchmarked the Essential Water business against metropolitan and regional water businesses, without considering its unique operating environment.

The area Essential Water services is the most arid in NSW, with extreme climatic variations and more frequent drought than coastal areas. Evaporation is the largest consumer of water in the Far West.

Very low annual average rainfall of around 250mm and high air and soil borne lead particle levels (residues of previous mining activity) prevent tank-captured rainwater being utilised for drinking purposes.

In eight out of ten years, town water supply has to be sourced as raw (untreated) water from the Menindee Lakes Scheme on the Darling River and pumped through 120 kilometres of pipeline, and to a height of 270 metres, to the Mica Street water treatment plant in Broken Hill.

The NSW Far West region has recently entered a drought cycle. Local reservoirs at Stephens Creek and Umberumberka are both almost dry.

Figure 3.4 (*courtesy NSW Office of Water*) provides a forecast of water stored in the Menindee Lakes system against salinity levels.

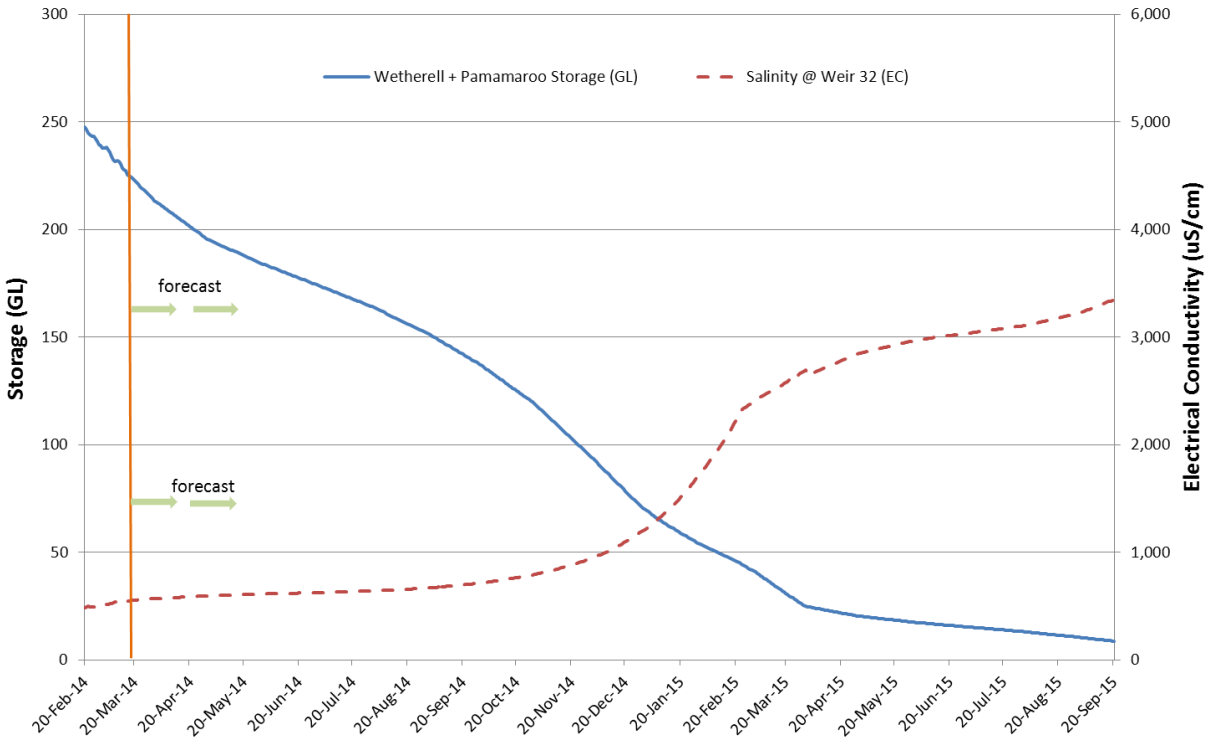

Figure 3-4 - Forecast of Menindee storage and salinity*

* *NSW Office of Water modelling showing draw-down of the Menindee system and forecast salinity levels (Note: The modelling assumes no inflows and average monthly evaporation rates (mm/day. It also anticipates implementation of some contingency measures)*

During drought conditions predicted over the four years of the next determination period, operating costs will significantly increase for electricity supply associated with continuous water pumping from Menindee, and for higher rates of chemical use to treat very poor raw water quality resulting from low water storages.

Failure to determine adequate operating expenditure could result in financially driven restrictions on water delivery and quality.

Overall, IPART's operating expenditure Draft Report would result in a decline in customer service outcomes.

4 CAPITAL EXENDITURE

IPART's Draft Report acknowledges that a number of Essential Water's water and sewerage systems are progressively reaching end of life, and investment is necessary to meet customer requirements, renew ageing assets, comply with safety and environmental requirements and deliver these essential services into the future. This section provides the following:

- section 4.1 provides key highlights of Essential Water's Submission
- section 4.2 provides an overview of IPART's Draft Report
- section 4.3 provides Essential Water's assessment and response to the Draft Report.

4.1 Essential Water Submission

Essential Water's Submission included a program of prioritised infrastructure renewal and pro-active maintenance aimed at preventing major plant or systems. Essential Water's proposed capital program:

- is structured around risk-based planning that tracks asset performance and prioritises expenditure to ensure future water and sewerage security and quality for customers
- deems all projects to be prudent
- has also been assessed by NSW Public Works in its independent Review of Essential Water's Capital Investment Plans and Expenditure Report to ensure that all capital expenditure is necessary, efficient and complies with industry guidelines
- included investment of $52.2 million over the next regulatory period.

4.2 IPART Draft Report

IPART assessed Essential Water's forecast capital expenditure for the next regulatory period. IPART considered information Essential Water included in its Submission. IPART also engaged SKM to provide an independent detailed review of Essential Water's forecast capital program and a high level review of its past capital program.

After considering Essential Water's proposed capital expenditure forecast and the review completed by SKM, IPART in its Draft Report determined that capital expenditure be reduced in the order of $13.7 million for the next regulatory period. Although SKM and IPART in its Draft Report deemed all capital projects as prudent, adjustments were applied to the capital program. These adjustments were driven by the following:

- reductions or deferment of most projects (based on advice of consulting firm, SKM), with associated capital expenditure reduction of $9.4 million
- the application of a further 10 per cent capital expenditure reduction of $4.3 million to reflect efficiencies determined to be gained through improved asset management practices, resulting in a capital expenditure determination that is 26 per cent, or $13.7 million, lower than Essential Water's proposal.

The Draft Report did not include a financial provision for development and implementation of improved asset management practices.

4.3 Essential Water response

IPART's proposed $13.7 million capital investment program reduction or deferral will delay completion of all proposed projects, resulting in:

- increased infrastructure failure rates, resulting in unreliable water and sewerage services
- increased potential for environmental and public health non-compliance
- a change from pro-active, preventative to reactive, breakdown maintenance, leading to increased capital and operational expenditure
- increased risk of assets running to failure
- compounding infrastructure failure risk in this, and future, regulatory periods.

Combined with associated workforce reductions, IPART's Draft Report will result in degraded asset condition and increasing, rather than decreasing, capital and operational costs.

Impact of proposed reduction in capital expenditure

IPART expects that Essential Water will deliver on the targets and outcomes of the capital program proposed in Essential Water's Submission. This means that Essential Water is expected to deliver the capital program for $13.7 million (or 26 per cent) lower than estimated by Essential Water and reviewed and endorsed by NSW Public Works.

Realistically, delivering the program at the levels proposed in the Draft Report is unachievable. It is likely that projects will be prioritised with the aim of reducing the projects completed in this period. This means deferral of critical projects is inevitable, leading to increased infrastructure failure rates.

The following proposed capital projects would be unlikely to proceed:

- Stephens Creek dam wall rehabilitation – resulting in Essential Water being non-compliant with NSW Dam Safety Committee requirements
- refurbishment of service reservoirs – resulting in a decline in water quality standards
- major works at Menindee water treatment plant – which requires major works to extend its life
- Sunset Strip potable water upgrade
- preparatory work for the replacement of the Wills Street Waste Water Treatment Plant
- refurbishment of the South Waste Water Treatment Plant

In addition, expenditure on several other proposed projects would need to be reduced.

Impact on supply quality and reliability

Figure 4.1 shows that a reduction in operational funds to carry out regular maintenance programs and reduced capital expenditure to repair aging infrastructure will lead to more sewerage system failures.

Essential Water's sewerage system is predominately earthenware pipe and almost all sections have some type of infiltration from roots which requires regular maintenance to keep the pipe clear.

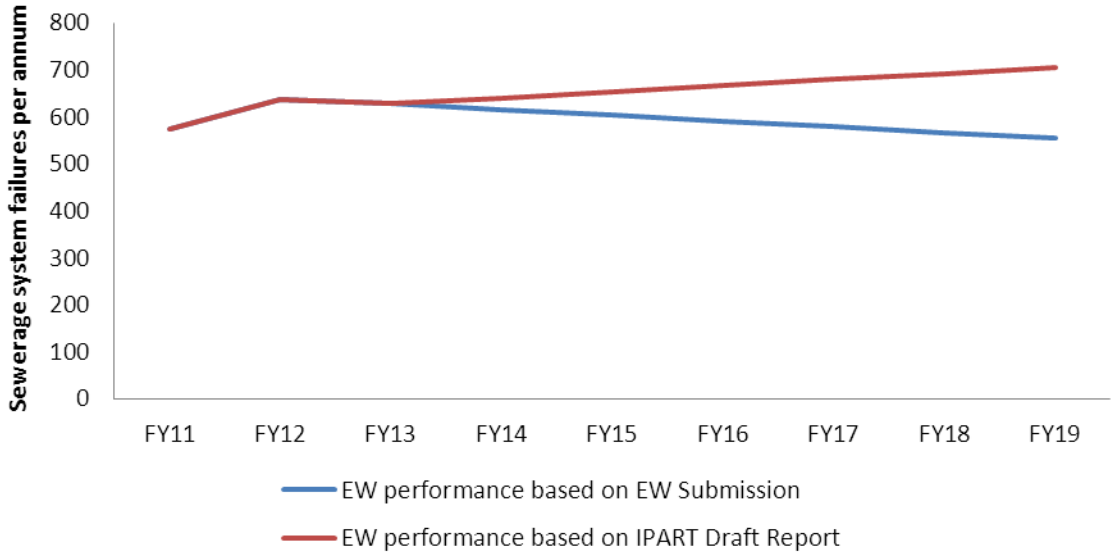

Figure 4-1 - Forecast sewerage system failures

Figure 4.2 demonstrates the potential impacts of the reduced capital program on water quality.

Reduced funding will prohibit periodic enhanced coagulation water treatment, where a high dose of aluminium sulphate is used for dissolved organics removal. This will result in increased chlorine demand and coloured water events.

Note: The dip in FY17 in Essential Water's Submission is an extrapolation of current data. Periodic extreme raw water quality events and occasional plant failures make it difficult to achieve 100 per cent aesthetic compliance.

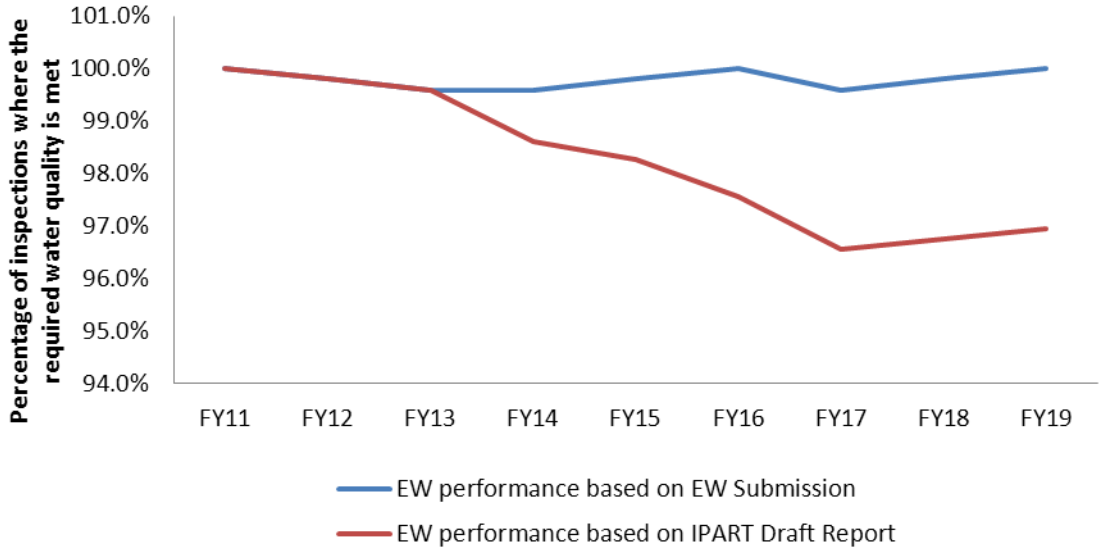

Figure 4-2 – Forecast water quality scenarios

Improvement in asset management practices

Essential Water acknowledges SKM's and IPART's view that there are improvement opportunities in regards to asset management practices applied by Essential Water.

However, Essential Water cannot continue the asset management improvement journey due to reductions in both operating and capital expenditure and associated depletion of resources required to deliver enhanced asset management practices. As discussed in Section 3, for Essential Water to deliver on the allowances set out in IPART's Draft Report, a reduction of 22 FTEs would be required. Management of Essential Water's assets cannot be improved without investment in human resources and systems.

Essential Water has recognised in the past that some improvement in asset management is required. However, these improvements cannot be identified and implemented in a short time frame. Rather, it is a process of continuous improvement implemented over time commensurate with the availability of sufficient expertise. In recognition of this continuous improvement journey, Essential Water engaged NSW Public Works to provide an assessment of the proposed capital program for the next regulatory period.

NSW Public Works review of Essential Water's capital program

NSW Public Works examined the engineering suitability and the veracity of the associated cost estimates of Essential Water's capital program. Through this examination, NSW Public Works provided alternative solutions, cost estimates and/or timing of delivery.

The NSW Public Works review involved the following methodology:

- **Data collection** – Essential Water provided all relevant available data and reports
- **Site inspection** – NSW Public Works reviewed the condition of assets and gathered additional information
- **Data analysis and cost estimates** – The design and cost estimates of capital projects were reviewed by the principal engineers.

Essential Water largely accepted the findings of the NSW Public Works assessment of the capital program. For example, the refurbishment of the Wills Street sewerage treatment worked was initially proposed to be completed in the next regulatory period. Based on the NSW Public Works review, it was recommended that the refurbishment of Wills Street be abandoned. Instead, replacement should occur in the regulatory period commencing in 2018, with initial works to commence in the next regulatory period.

5 RETURN ON ASSETS

This section provides the following:

- section 3.1 provides key highlights of Essential Water's Submission
- section 3.2 provides an overview of IPART's Draft Report
- section 3.3 provides Essential Water's assessment and response to the Draft Report and focuses only on the inflation, method of averaging current and long term WACC calculations and Market Risk Premium areas. More in depth discussion of all areas are contained in ***Appendix B – Return on assets***.

5.1 Essential Water Submission

Essential Water's methodology proposed in its Submission produced a real Weighted Average Cost of Capital (WACC) of 5.9 per cent or 8.5 per cent nominal, when adjusting for 2.5 per cent inflation.

5.2 IPART Draft Report

IPART's methodology outlined in its Draft Report used to calculate Weighted Average Cost of Capital (WACC) has produced an unreasonably low real WACC of 4.9 per cent – significantly lower than Essential Water's proposed WACC of 5.9 per cent.

5.3 Essential Water response

Essential Energy has reviewed IPART's approach to the return on capital and does not accept the methodology adopted. This section, in conjunction with ***Appendix B – Return on assets***, focuses on the following key areas:

- use of a real post tax WACC
- inflation
- methodology of averaging current and long term WACC calculations
- Market Risk Premium (MRP)
- use of RBA data.

It is important to note that IPART has consistently applied a CPI of 2.5 per cent throughout its modelling, except in WACC composition, where IPART has used a CPI of 2.8 per cent.

When this higher CPI rate is used to convert WACC from nominal to real terms, it creates a lower real WACC, which is used to calculate a return on assets which is lower than normal. Part of this return on assets is intended to service interest payments on borrowings.

Figure 5.1 shows the implied cost of debt used in IPART's WACC compared with the actual interest rates IPART acknowledges in its modelling, and which align to Essential Water's actual forecast average interest rates.

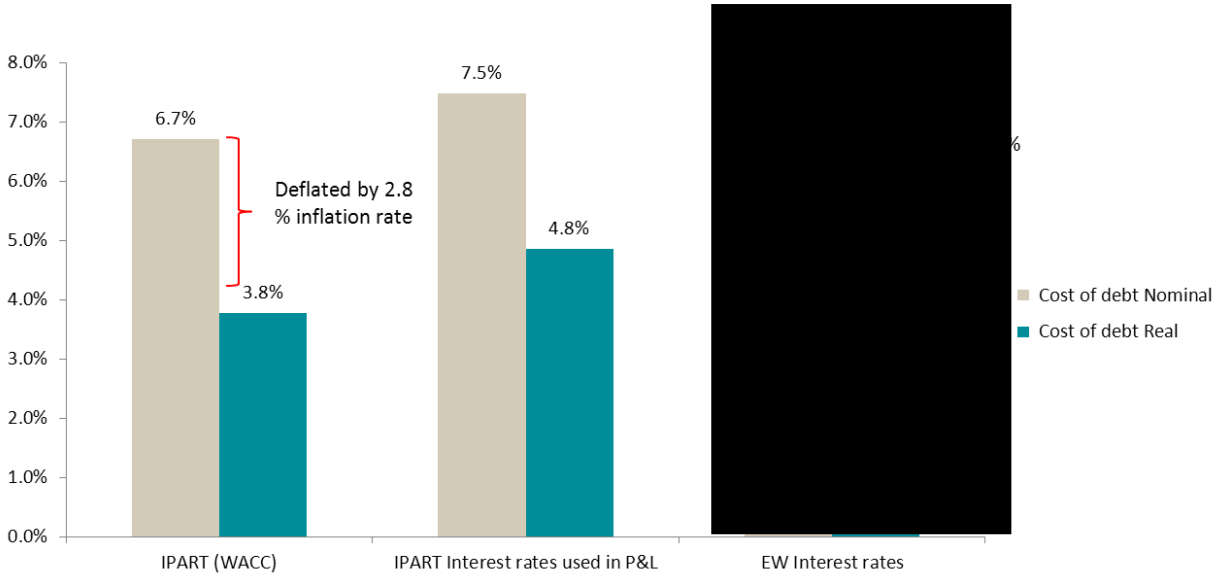

Figure 5-1 – IPART cost of debt in the WACC does not align to actual interest rates

Methodology of averaging current and long term WACC calculations

The reason IPART have used such a low cost of debt rate is due to its methodology of applying a 50:50 weighting to existing rates for 10 year Commonwealth Government Security yields (CGS) versus the long term average rate over 10 years for this type of security. The IPART methodology does not acknowledge the long term nature of the Essential Water business and its debts. It is not a start-up business borrowing significant amounts at current rates.

Essential Water is not planning on immediately entering an expansion phase and doubling its debt (financing another 50% at current rates) which the current 50:50 weighting infers. Adjusting this weighting to emulate the steady nature of the Essential Water business would necessitate a much higher weighting is placed on the long term average rates.

A weighting of 90:10, Long term vs current rates, would better represent the existing and forecast financings of Essential Water, and provide a more cost reflective interest allowance for Essential Water to service its borrowings. The revenue derived under IPART's proposed WACC is too low and will not cover Essential Water's interest payments, therefore there will be less cash available for investment in capital infrastructure or to service existing debt.

Figure 5.2 shows the impact that this decision may have on Essential Water.

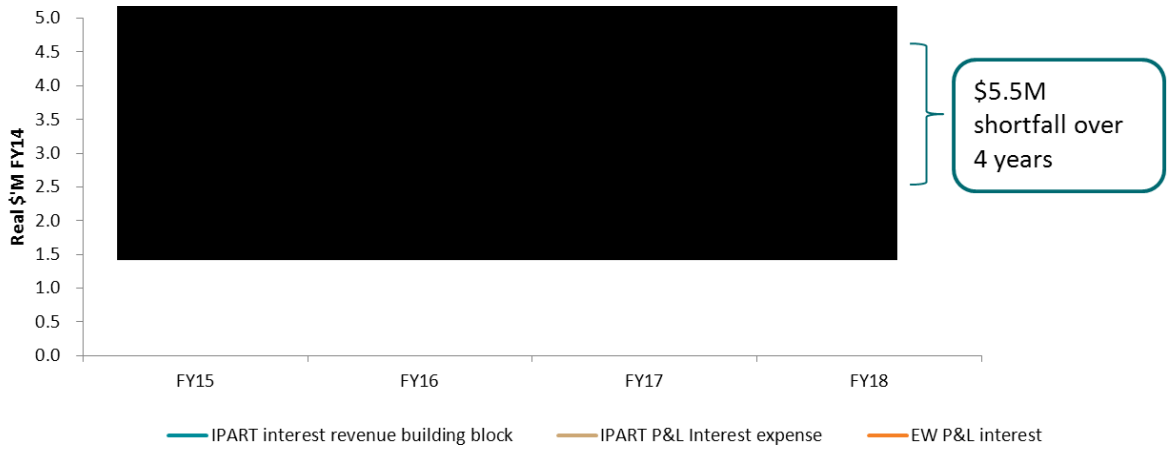

Figure 5-2 - IPART assumed cost of debt is much lower than Essential Water's cost of debt

Market Risk Premium (MRP)

Economic consulting company, NERA[1], has recently conducted a review of the MRP and concluded that 6.5 per cent – higher than the 6 per cent in the IPART's WACC composition – would be an appropriate return. IPART's MRP translates into lower revenue returns for Essential Energy and its shareholders.

Based on the above discussion in this section along with further detailed discussion in Appendix ***B – Return on assets*** Essential Water recommends the following:

- We support IPART's move to a post-tax framework and consider that an approach whereby corporate tax is modelled in the cash flows is preferable to "grossing up" a post-tax weighted average cost of capital (WACC) to account for corporate tax through the rate of return calculation.
- To ensure internal consistency in its modelling, we suggest that IPART not base its inflation calculation on swap rates and instead use either the 2.5% mid-point of RBA's target inflation range of 2% to 3%, or the RBA's two year forecast of inflation plus 8 years of the RBA inflation target, which we have calculate as 2.57%.
- If IPART does not move to the exclusive use of a long term WACC methodology to provide pricing stability for customers and longer term stability for equity holders, Essential recommends that IPART reweight its WACC calculation to be based on a 90:10 weighting, assuming 90% application of the long term WACC methodology and 10% application of the current WACC methodology.
- Essential proposes that an MRP of 6.5% be adopted for the long term WACC methodology return on equity calculation.
- Combining the above recommendations for inflation, averaging current and long term WACC methodologies and MRP would lead to a conservative post-tax nominal WACC of 8.27% that converts to a post-tax real WACC of 5.63%.
- IPART moves to its preferred approach to calculating the cost of debt using RBA data for the Essential Water final decision for the regulatory period commencing 1 July 2014.

[1] ENA Submission to the AER draft Rate of Return submission 11 October 2013. References NERA reports titled "*The Market, Size and Value Premiums, A report for the Energy Networks Association, June 2013*" and "*The Market Risk Premium: Analysis in Response to the AER's Draft Rate of Return Guidelines, October 2013*".

6 PRICES

This section provides the following:

- section 6.1 provides key highlights of Essential Water's Submission
- section 6.2 provides an overview of IPART's Draft Report
- section 6.3 provides Essential Water's assessment and response to the Draft Report.

6.1 Essential Water Submission

In its Submission to IPART, Essential Water proposed that the structure of water and sewerage tariffs should remain fundamentally unchanged from the current tariffs in place – the tariff for water services will comprise a monthly fixed charge plus a volumetric charge based on actual water consumption.

Current tariffs include a two-tier structure – known as an inclining tariff system – which provides an incentive for customers to conserve water.

6.2 IPART Draft Report

In its Draft Report, IPART proposes removing Tier 2 usage prices, leaving a single tier for water usage prices for Broken Hill and surrounding areas and setting all prices at the current Tier 1 price.

6.3 Essential Water response

The inclining tariff system is a robust and fair water saving incentive.

During drought periods from September 2002 to April 2003, and from January to February 2004, water restrictions were applied when reserves reached extremely low levels. An inclining tariff system was introduced in July 2004 as a 'user pays' water efficiency incentive. Since its introduction, this system has successfully mitigated the need for water restrictions.

The inclining tariff structure is also an effective tool to signal additional pumping costs associated with high water consumption, particularly during dry periods.

Essential Water has remained cognisant of the environment and the need for higher water usage in such an environment. An additional 50KL of consumption at Tier 1 was introduced into tariffs in summer quarters from 1 July 2006 to ensure that customers could cost-effectively water lawns and gardens.

As discussed in Section 3.3, Broken Hill and surrounding areas are once again entering a drought period. IPART's removal of a financial incentive to adopt water efficiency and conservation measures at the commencement of a drought period could potentially result in:

- increased operational costs for higher water volume pumping and treatment
- depletion of limited water reserves and the need for future water restrictions for residential and business customers (including the mines, with associated operational impacts).

Essential Water recommends that it would be more appropriate for IPART to retain the two-tier tariff structure and raise the level of consumption in Tier 1.

7 MINES PRICES

This section provides the following:

- section 7.1 provides key highlights of Essential Water's Submission
- section 7.2 provides an overview of IPART's Draft Report
- section 7.3 provides Essential Water's assessment and response to the Draft Report.

7.1 Essential Water Submission

Essential Water proposed a pricing structure for water consumed by Broken Hill's mining operations has been developed in conjunction with the mines pricing working group, which comprised representatives of the Office of Water, IPART, Department of Resources and Energy, Department of Finance and Services, NSW Treasury and Essential Energy. It incorporates a predominantly fixed structure to signal the relatively fixed and sunk costs of supplying water to mines. The total revenue proposed to be recovered from mines is marginally below 2013/14 levels.

7.2 IPART Draft Report

IPART's Draft Report maintains mines' contributions to Essential Water's water revenue at current 2013/14 levels.

However, IPART has also determined that the mines pricing structure should comprise a low fixed component and a large variable component. The fixed component is calculated using the number of physical meters.

7.3 Essential Water response

Essential Water contends that the mines pricing structure proposed by IPART introduces significant revenue risk that the remaining customer base will ultimately have to bear. Essential Water's cost structure to support the mines is predominantly fixed and a cost reflective tariff is logical.

The variable component of the pricing structure creates incentives for mines to invest in on-site water sourcing and treatment via reverse osmosis, and to substitute treated water with raw water for suitable applications, such as dust suppression.

If the mines significantly decrease their treated water usage, the relative costs associated with providing water to these sites will not reduce significantly. At the same time, the reduced revenue will severely impact customer pricing in the future.

IPART is proposing an incentive that, if adopted, would transfer costs to all other customers.

The fixed component of the pricing structure creates an incentive for the mines to consolidate their many metering, or connection, points, which would further lower fixed charges.

IPART's proposed pricing structure introduces incentives for mines to substantially alter their contribution to the water business revenue stream and its sustainable operation. The significant revenue burden this creates will be borne by the remaining customer base in the next regulatory period commencing 2018/19.

Revenue reductions in addition to those already proposed by IPART will compromise service delivery and network maintenance in the 2014-18 determination period, and will place a significant financial burden on the remaining customer base, particularly in the regulatory period commencing 2018/19.

Essential Water does not support IPART's proposed mines pricing regime on the basis that it will place a significant burden on the remainder of the customer base in the next regulatory period commencing 2018/19.

8 CONSUMPTION RISK

This section provides the following:

- section 8.1 provides key highlights of Essential Water's Submission
- section 8.2 provides an overview of IPART's Draft Report
- section 8.3 provides Essential Water's assessment and response to the Draft Report.

8.1 Essential Water Submission

Essential Water proposed a Demand Volatility Adjustment Mechanism (DVAM) due to the uncertainty of water consumption – particularly in relation to mines water consumption.

8.2 IPART Draft Report

IPART has accepted Essential Water's proposal, although any adjustments resulting from consumption variances would be adjusted through the regulatory asset base, rather than through revenue directly.

This means that any revenue over or under recovery will be spread out over time equal to the average asset life, rather than through the preferred approach of an unders and overs account linked to revenue.

8.3 Essential Water response

IPARTs Draft Report introduces significant revenue risk for Essential Water through:

- unsustainable operating expenditure allowances, meaning prudent and efficient operating expenditure will not be recovered
- a mines pricing regime that creates significant incentives for mines to substantially alter the contribution they make to Essential Water's water operations
- a DVAM that, in Essential Water's opinion, is inadequate.

Essential Water supports the introduction of a DVAM, but does not support adjustments to revenue over and under recovery being dealt with through the regulatory asset base.

Essential Water recommends addressing revenue adjustments resulting from consumption variances through an unders and overs revenue mechanism, which is applied to revenue directly. This is important for the following reasons:

- cash flows for Essential Water's water business are currently insufficient
- this will only be exacerbated if IPART's Draft Report is implemented
- in the event that revenue is over-recovered, customers will have to wait 47 years to be compensated, in line with the remaining life of assets in the regulatory asset base. Therefore compensation is likely to be negligible due to the time frame

Essential Water supports the introduction of the DVAM.

However, Essential Water strongly recommends that adjustments to future revenues are through revenue directly, rather than through the regulatory asset base. These factors will significantly deplete the already strained financeability indicators (see Section 9).

9 FINANCEABILITY

Financeability looks at the impact of IPARTs regulatory decision on the financial position of Essential Water now, and into the future.

- section 9.1 provides key highlights of Essential Water's Submission
- section 9.2 provides an overview of IPART's Draft Report
- section 9.3 provides Essential Water's assessment and response to the Draft Report.

9.1 Essential Water Submission

In its Submission to IPART, Essential Energy did not address the financeability of Essential Water specifically, as the water business is not a separate legal entity and financeability information (in terms of balance sheets and cash flow statements) are not readily available.

9.2 IPART Draft Report

- As Essential Energy did not provide IPART with financeability data, IPART conducted its financebility testing using Hunter Water's actual gearing ratio, debt levels and interest rates as proxies
- IPART's financial ratios forecast Essential Water to be consistent with a Moody's rating of Baa2 indicating moderate credit risk
- IPART acknowledged that, due to the Essential Water's significant capital program, the business would be close to IPARTs optimal notional gearing range at the end of the determination period.
- IPART acknowledged that it required further information from Essential Water on actual debt and interest costs to reach a more informed view.

9.3 Essential Water response

Essential Water does not accept the use of proxies as an appropriate basis to test the financeability of the water business for the following main reasons:

- Essential Water's reconstructed debt position indicates that its gearing ratio would start at [redacted] per cent in 2013/14 and rise to [redacted] per cent by the end of the regulatory period. This is much higher than IPART's starting 47 per cent proxy.
- The interest costs on this higher debt are consequently higher than the interest modelled.
- The Funds from Operations (FFO) available after these higher interest costs are, therefore, much lower than those modelled by IPART.
- Essential Water accepts that the actual interest rates used by IPART in interest cost calculations are relatively consistent with Essential Water's forecast interest rates, although, as mentioned in Section 5, the rates used in the WACC to determine the revenue to service these interest costs are lower (Figure 5-1).
- IPART only conducts its financeability testing over the regulatory period and does not consider medium to long term impacts of its decision.
- Essential Water's modelled forecast financial ratios over the period to 2017/18 indicate that the business would be in a much worse financial position if it were not being subsidised by Essential Energy – being more consistent with a Moody's credit rating of Baa3 (moderate credit risk, but at the low end of the scale) to a Ba1 (high credit risk) rating.
- Due to the ageing infrastructure and large projects (such as the $20-plus million replacement of the Wills Street Waste Water Treatment Plant), the medium to long term financeability forecast is unsustainable as funds from operations would not be able to meet ongoing debt obligations.

Essential Water's actual debt

IPART requested actual debt information from Essential Water to make a more informed decision on financeability.

Essential Energy provided a loan balance for Essential Water to IPART of $42 million (based on an intra-business unit account balance to Essential Water as per Essential Energy's accounts as at the end of financial year 2013).

IPART had been advised, and has acknowledged, that this may not be the true extent of the loan balance. IPART's financial ratios were constructed on this level of debt and related interest costs.

A reconstructed cash flow, including historical capital expenditure going back to 2005/06, calculates the loan balance to be [redacted] million – more than [redacted] million higher than the $42 million initially provided to IPART. This could rise to $[redacted] million by 2017/18.

This level of debt is unstainable for Essential Water. Since IPART's proposed interest allowance will not adequately service the interest payments, Essential Energy would have to subsidise Essential Water, unfairly placing the financial burden on its electricity customers.

Figure 9-1 below shows a possible [redacted] million gap in debt levels by financial year 2017/18.

Figure 9-1 - Essential Water debt profile is much higher if actual capital expenditure from 2005/06 is used

Medium to long term debt

Even if the starting debt is assumed to be the initial $42 million provided to IPART, Figure 9-2 below shows long term debt modelling driven by Essential Water's ageing infrastructure, which requires significant capital investment in the future.

The cost of replacing the Wills Street Waste Water Treatment Plant (more than $20 million) and ongoing recurrent capital replacement programs for pipelines and reticulation could see debt levels rising to [redacted] million – an increase of [redacted] million over the next 10 years.

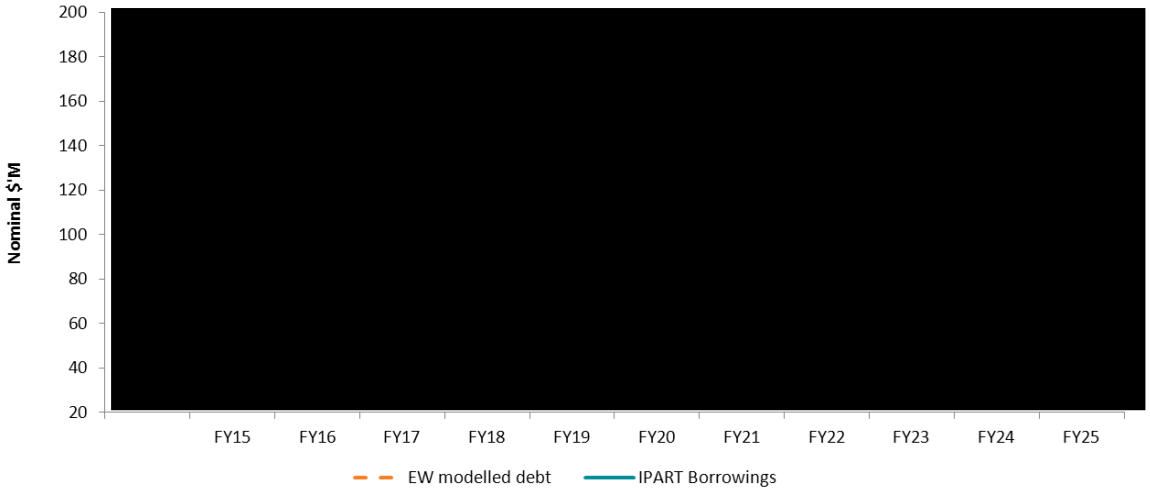

Figure 9-2 – Debt levels are not sustainable

Interest costs

IPART requested actual interest costs based on actual debt to be provided. Using a starting debt of $[redacted] million, the higher annual interest costs associated with this debt lead to an accumulated net cash deficit of $7 million more than IPART's modelling over the four year period ending in financial year 2017/18, as shown in Figure 9-3.

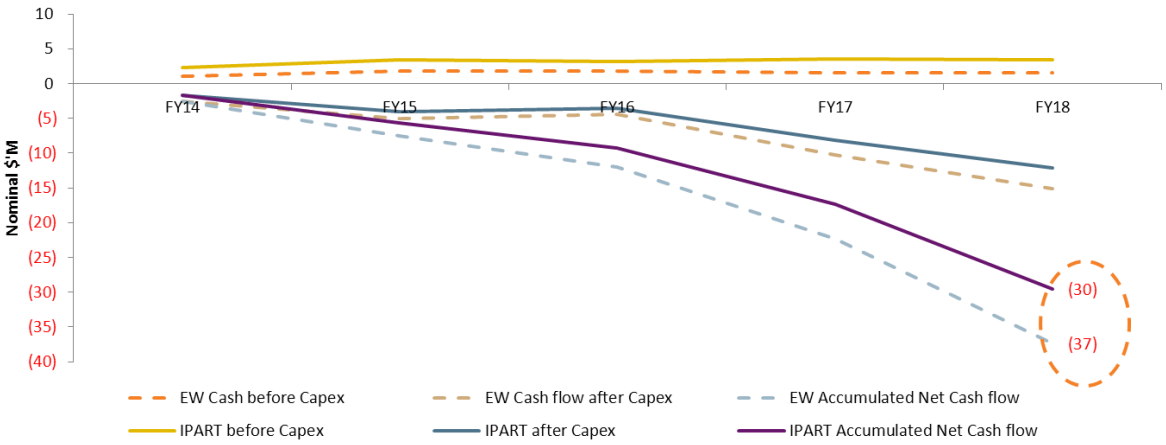

Figure 9-3 – Accumulated net cash flows based on actual interest costs show an increasing cash deficit and is not sustainable given the level of future capital expenditure required to replace ageing infrastructure

Impact of historical debt on cash flow

Historical long term debt and future debt cannot be serviced under IPART's proposed regulatory model, which undervalues the regulatory asset base and does not provide for sufficient revenue returns to service past or future levels of debt. The current regulatory asset base allowed is not cost reflective of the water and sewerage assets replacement cost.

The cash flows proposed by IPART to fund capital expenditure and operations are insufficient to maintain sustainable positive cash flows without going even further into debt. Figure 9-4 shows the annual negative cash flows after capital expenditure, accumulating to $11 million by the end of financial year 2017/18.

Figure 9-4 – Cash flows based on capital expenditure from FY06 are consistently negative

Financial ratios

Based on the above discussion on actual debt and interest costs, Essential Water has recalculated the financial ratios in order to compare these to IPART's draft ratios. The results shift Essential Water from IPART's forecast mid range position of a Baa2 medium credit risk, to a Baa3 higher medium risk, bordering on a Ba1 high level of credit risk.

The tables below show:

- IPART's financial ratio benchmarks and financial ratios used in assessing Essential Water's financeability[2]
- Essential Water's financial ratios using actual debt and interest costs.

Financial Ratio Benchmarks	A3	Baa1	Baa2	Baa3	Ba1
FFO Interest Cover	>2.9	2.3x-2.9x	1.7x-2.5x	1.4/1.5x-1.7x	<1.4/1.5
Net Debt/RAB	<60%	80%-85%	60%-91%	90%->100%	>100%
FFO to Net Debt	>10%	>10%	<6-10%	5-8%	<4%

IPART	FY14	FY15	FY16	FY17	FY18
FFO Interest Cover	1.7	2.0	1.9	1.8	1.7
Net Debt/RAB	47%	49%	50%	54%	58%
FFO to Net Debt	5%	7%	6%	5%	4%

Essential Water	FY14	FY15	FY16	FY17	FY18
FFO Interest Cover	0.6	0.4	0.5	0.5	0.6
Net Debt/RAB	81%	82%	84%	87%	90%
FFO to Net Debt	3%	4%	4%	3%	3%

[2] IPART, Essential Energy's water and sewerage services in Broken Hill, Review of prices from 1 July 2014 to 30 June 2018, Water-Draft Report, March 2014, 122-123.

Subsidisation of Essential Water by Essential Energy

Essential Water is able to access debt through Essential Energy's Baa1 (medium credit risk) and enjoys economies of scale through being part of Essential Energy. As a stand-alone business, Essential Water would be unlikely to enjoy the same benefits, based on Baa3 to Ba1 ratings.

The financial status of Essential Water is hidden when consolidated with Essential Energy and, effectively, Essential Energy has been subsidising Essential Water since the two organisations joined in 2005.

The majority if Essential Water's infrastructure is reaching the end of its useful life and needs large capital investment in the future. Since regulated revenue from Essential Water is not sufficient to reverse the current levels of debt, or service future capital programs without access to more debt, Essential Energy would be required to fund Essential Water's future financial requirements.

It should also be noted that Essential Energy impairs all Essential Water assets, and capital expenditure is written off as impaired in the year it is incurred. This results in net losses to Essential Water and, when consolidated with the electricity business, means that Essential Energy's annual profits will be eroded over the next four years by net losses from the water business, as shown below in Figure 9-5.

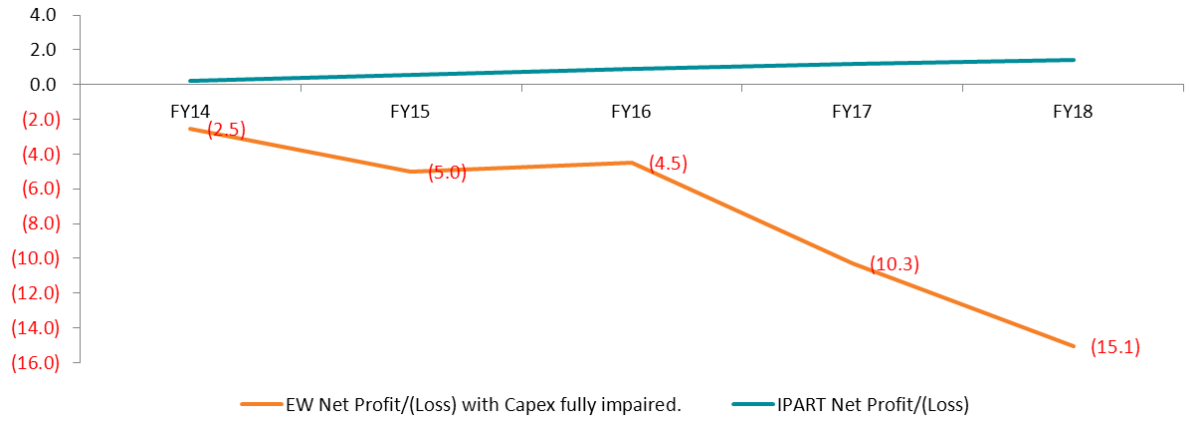

Figure 9-5 – Annual net losses arising from impairment of capital expenditure reduces profits and dividends payable by Essential Energy upon consolidation

10 APPENDIX A – INTERPRETATION

In this response, headings are for convenience only and do not affect interpretation unless the context indicates a contrary intention:

- Essential Energy's water and sewerage business, trading as Essential Water, is referred to throughout the document as Essential Water (EW)
- A reference to any party includes that party's executors, administrators, successors, substitutes and assigns, including any person taking by way of novation
- Words importing the singular include the plural (and vice versa), words denoting a given gender include all other genders, and words denoting individuals include corporations (and vice versa)
- References to currency are references to Australian currency unless otherwise specifically provided
- Data presented in tables contained in this Submission may not add due to rounding
- References to any legislation or to any section or provision thereof includes any statutory modification or re-enactment or any statutory provision substituted for it, and ordinances, by laws, regulations, and other statutory instruments issued thereunder, and
- References to capital expenditure are references to net capital expenditure, exclusive of capital contributions, unless otherwise stated.

APPENDIX B – RETURN ON ASSETS

1. Use of a real post-tax WACC

In its Draft Report, IPART has moved from a **pre-tax** framework to a **post-tax** framework.

Recommendation: Essential Water supports IPART's move to a post-tax framework and consider that an approach whereby corporate tax is modelled in the cash flows is preferable to "grossing up" a post-tax weighted average cost of capital (WACC) to account for corporate tax through the rate of return calculation.

However, Essential Water has concerns about IPART's approach to converting a nominal post-tax WACC to a real post-tax WACC through a combination of swap market implied inflation expectations from 2 January 2009 to date and break-even inflation (BEI) expectations for the period over which the swap market implied inflation is not available.

This approach under-compensates Essential Water for inflation and understates IPART's implied post tax nominal WACC.

2. Inflation

Essential Water notes that IPART uses, in effect, an arithmetic average of the midpoints of the "current" WACC range and a "long term" WACC range (see section 3 below). IPART converts a nominal post-tax WACC to a real post-tax WACC using inflation rates calculated as follows:

- Current WACC inflation rate of 2.8 per cent – based on the 40-day average of the swap-implied inflation with a 10 year term to maturity
- Long term WACC inflation rate of 2.9 per cent – based on a hybrid approach with an averaging period of 10 years. This approach combines:
  - swap market implied inflation expectations for the period from 2 January 2009 to 14 January 2014
  - break-even inflation (BEI) for the period over which the swap market implied inflation is not available (ie: from 15 January 2004 to 31 December 2008).

Essential Water does not support the use of swap rates and break-even inflation to convert a nominal post-tax WACC to a real post-tax WACC. Using swap rates systemically overstates inflation relative to the cash rates used elsewhere in IPART's model and results in a mismatch between physical (i.e. CGS) and swap markets.

As IPART bases its WACC calculation on a nominal post-tax WACC, then deflates to a real post-tax WACC using an assumption for inflation, a higher inflation rate based on swap rates leads to a lower real WACC. This would not be a concern if IPART compensated Essential Water elsewhere in its model for inflation. However, it is clear from Figure 2.3 in the Draft Report that IPART inflates revenues using a lower inflation rate and decreases the WACC using a higher rate as indicated below:

> *The values have been presented in nominal dollars for consistency with Chapter 11, where bills have been presented in nominal dollars. We have assumed inflation of 2.7% in 2014/15 and 2.5% per year between 2015/16 and 2017/18.*

IPART adopts one approach to inflation for indexing the regulatory asset base (RAB) and expenditures, while using another (higher) inflation rate to convert the nominal post-tax WACC to a real post-tax WACC. This use of higher inflation rate based on an assessment of swap rates to deflate the nominal post-tax WACC while using a lower inflation rate to inflate the RAB and other revenue items is internally inconsistent and operates to undercompensate Essential Water for its efficient costs.

IPART's approach of using swap rates as the basis for deflating a post-tax nominal WACC has the effect of producing an unreasonably low "real" WACC given that the higher inflation is not compensated for elsewhere in the framework. Essential Water considers that, if IPART was to maintain is use of swap rates

to set inflation, it must apply this consistently when indexing the RAB and other elements of required revenues.

A more reasonable approach would be to use (like the AER) the mid-point (2.5 per cent) of the RBA's inflation target range (2-3 per cent) or alternatively, the RBA's two year forecast of inflation plus eight years of the RBA inflation target, which Essential Water has calculated to be 2.57 per cent.

Essential Water notes the use of RBA forecast for inflation is consistent with the approach adopted by the Australian Energy Regulator as outlined in its recent SP Ausnet transmission decision for the 2013-17 period:

> *The expected inflation rate is not a parameter relevant to the determination of the WACC.*[3] *However, it is used in the post tax [sic] revenue model (PTRM)—for example, to index the RAB—and is an implicit component of the nominal risk free rate. For this reason, this attachment discusses our determination of the expected inflation rate.*
>
> *Our approach to estimating inflation is consistent with that used in previous regulatory decisions.*[4] *This method involves:*
>
> - *taking a geometric average of forecast inflation for each of the next 10 years commencing from the start of the 2013–17 regulatory control period (consistent with using a 10 year term for the risk free rate and other WACC parameters)*
> - *adopting the Reserve Bank of Australia's (RBA) headline inflation forecasts from the latest RBA Statement on Monetary Policy, for as many future years as the RBA publishes inflation forecasts*
> - *adopting the mid-point of the RBA's inflation target (2.5 per cent) for the remaining future years (out to year 10).*

Recommendation: To ensure internal consistency in its modelling, Essential Water suggests that IPART does not base its inflation calculation on swap rates and instead uses either the 2.5 per cent mid-point of RBA's target inflation range of 2 per cent to 3 per cent, or the RBA's two year forecast of inflation plus 8 years of the RBA inflation target, which Essential Water has calculated as 2.57 per cent.

The use of a 2.5 per cent inflation rate would result in a real WACC of 5.23 per cent, while leaving the nominal Vanilla WACC unchanged at 7.86 per cent.

3. Averaging of short and long term WACC calculations

As part of its new WACC methodology, IPART establishes the WACC via the following three-stage process:

- estimate a WACC range based on long term averages (the long term WACC range) and a WACC range based on current market data (the current WACC range)
- use the midpoints of the long term and current WACC ranges as the upper and lower bounds of a final WACC range
- calculate the midpoint of the final WACC range by taking the simple average of the midpoints of the long term and current WACC ranges.

Implicit in this assumption is that there should be equal weighting between the current and long term approaches. That is, it suggests equal weighting be given between a company with no long term debt, such as a start-up company (ie: that could issue debt based on "current" WACC methodology) and an established water company with existing long term debt (i.e. whose debt is issued using the long term WACC methodology). While the efficient cost of debt for a start-up company would be the prevailing rate (as the company would not have pre-existing debt), the efficient cost for an ongoing water infrastructure business would be based on debt issued on a staggered portfolio basis over many years.

[3] The WACC formulation is based on nominal parameters and does not incorporate an explicit inflation rate parameter.

[4] For example, see: AER, *Final decision: ElectraNet transmission determination 2013–14 to 2017–18*, April 2013, and AER, *Final decision: APA GasNet Australia (Operations) Pty Ltd, access arrangement final decision, March 2013.*

IPART's assumption of a 50:50 weighting between the "current" and "long term" WACC methodologies is not appropriate as it is not representative of the nature of Essential's existing water infrastructure, which comprises very long lived assets. Essential Water considers that a fundamental objective of the regulatory framework is to promote long term pricing stability for customers and stable returns for equity holders by minimising the impact of short term volatility in financial markets. As such, Essential Water supports a long term approach to calculating the return on capital that is more consistent with IPART's long term WACC methodology.

In particular, Essential Water has historically issued debt on an efficient staggered portfolio basis that is aligned to a long term trailing average approach to calculating the cost of debt. The long term WACC methodology is more aligned to recognising that debt is issued on a staggered portfolio basis and that this is an efficient debt management strategy for water utilities. It is neither practicable nor efficient for Essential Water to issue debt for long lived water assets using IPART's current WACC methodology.

Essential Water notes that, giving equal (or any) weighting to short term debt issuances that produce a cost of debt ranging from 5.3 per cent to 6.6 per cent significantly under-compensates Essential Water and provides returns well below its efficient cost of debt. Essential Water would not be in a position to service its debt at these levels.

Recommendation: If IPART does not move to the exclusive use of a long term WACC methodology to provide pricing stability for customers and longer term stability for equity holders, Essential recommends that IPART reweight its WACC calculation to be based on a **90:10 weighting**, assuming 90 per cent application of the long term WACC methodology and 10 per cent application of the current WACC methodology.

The change to a 90:10 weighting of long term and current WACC methodologies, respectively, would produce a nominal Vanilla WACC of 8.15 per cent and a real WACC of 5.11 per cent (based on an inflation assumption of 2.5 per cent).

4. Market risk premium

This section addresses IPART's use of a 6 per cent market risk premium (MRP) when calculating the long term WACC methodology. As noted above, Essential Water supports the use of a long term approach to calculating the return on capital in order to promote stability for customers and equity holders, and as such will limit its comments on the MRP to be used in the long term WACC methodology.

The Australian Energy Regulator (AER) has recently considered the issue of the MRP in the development of its Rate of Return Guideline in December 2013. In light of the evidence in front of it, the AER has moved to increase the MRP to 6.5 per cent from its previously established estimate of 6 per cent as outlined below:

> *"Given the available information we consider 6.5 per cent an appropriate estimate of the MRP having regard to prevailing market conditions. After assessing the information, we consider this estimate contributes to the achievement of the allowed rate of return objective (Page 95)."*
> *…*
>
> *"We note our estimate of 6.5 per cent is a departure from our most recent decisions (Page 95)…"*[5]

In Submissions to the AER's Rate of Return Guideline development process on behalf of the Energy Networks Association (ENA) – of which Essential Energy is a contributing member – NERA undertook detailed reviews of the market, size and value premiums. In reviewing the AER's draft guidelines, the ENA Submission summarised research undertaken by NERA on MRP, as reproduced below:

> *The analysis by NERA was performed by reconstructing historical records from source material, and then re-calculating value-weighted dividend yields for selected years between 1891 and 1957. The results of the investigation demonstrated that the broad assumptions made by Brailsford, Handley and Maheswaran had caused a downward bias to the estimated dividend yield series, with the result that the MRP which they calculated was under-stated.*

[5] AER Rate of Return Guideline Explanatory Statement, December 2013.

*NERA has estimated that a corrected value for the historical average excess return is approximately **6.5 per cent** over the period from 1883 to 2011. The evidence obtained by NERA about the errors in the calculation of the historical excess returns is strong because the evidence is derived from a detailed audit of disaggregated historical data. There are no models or forecast assumptions that are intrinsic to the analysis [emphasis added].*[6]

As outlined in the NERA reports referenced above, an MRP of 6 per cent fails to address instances where the estimates reported in the papers by Brailsford, Handley and Maheswaran were understated due to particular assumptions made by the authors in compiling historical data. The difference in average estimates is close to 0.5 per cent which spans the entire range of point estimates for the MRP adopted by the AER in all determinations.

The use of an MRP of 6.5 per cent would increase the long term WACC nominal return on equity (ROE) from 9.3 per cent to a very conservative 9.65 per cent, which is still 25 basis points below the conservative ROE calculated through the use of the current WACC methodology (9.9 per cent).

Recommendation: Essential Water proposes that an MRP of 6.5 per cent be adopted for the long term WACC methodology return on equity calculation.

Recommendation: Combining the above recommendations for inflation, averaging current and long term WACC methodologies and MRP would lead to a conservative post-tax nominal WACC of **8.27 per cent** that converts to a post-tax real WACC of **5.63 per cent**.

5. Use of RBA data

Essential Water notes that IPART's WACC calculations are based on the application of their new WACC methodology, but that IPART has elected not to use its new preferred approach to calculating the cost of debt based on Reserve Bank of Australia (RBA) data. IPART has clearly indicated that it considers the use of RBA data to be preferable to the approach used in the Essential Water draft water determination as outlined below:

"The main advantage of the RBA's methodology is that its bond sample achieves an average tenor close to our target of 10 years by:

1. *including in the sample bonds with embedded options which tend to be issued with longer maturities, and*
2. *assigning a greater weight to a bond with a remaining maturity closer to 10 years in calculating credit spreads.*

We consider that this is an improvement over our current methodology. In addition, using the RBA's series would further increase transparency of our WACC determination process as data we use to calculate debt margins will be readily available through the RBA's website.

Table 2.2 summarises disadvantages of using the RBA's corporate credit spreads and our responses to them. Overall, we consider that the benefits of having a publicly available debt margin series published by a reliable and respected source outweigh the disadvantages listed in the table below. [emphasis added]"[7]

IPART goes on to state that "*We propose to start using the RBA data to estimate debt margins for reviews starting from 1 July 2014*."

This matter is not trivial for Essential Water, as illustrated in the following Debt Margin, Cost of Debt and WACC for Water Industry table reproduced from IPART's Fact Sheet titled "*New approach to estimating the cost of debt – Use of the RBA's corporate credit spreads – February 2014*".

[6] ENA Submission to the AER draft Rate of Return submission 11 October 2013. References NERA reports titled "*The Market, Size and Value Premiums, A report for the Energy Networks Association, June 2013*" and "*The Market Risk Premium: Analysis in Response to the AER's Draft Rate of Return Guidelines, October 2013*".

[7] IPART Fact Sheet – *New approach to estimating the cost of debt – Use of the RBA's corporate credit spreads* – February 2014. Page 3.

Debt Margin, cost of debt and WACC for water industry[8]		
	IPART	**RBA**
Debt Margin	2.1%	3.1%
Cost of Debt	6.7%	7.8%
Post-tax real WACC midpoint	4.8%	5.5%
Post-tax real WACC range	4.3%-5.2%	5.4-5.5%

As illustrated above, adjusting the WACC for IPART's preferred approach to calculating the cost of debt using RBA data increases the return on debt from 6.7 per cent to 7.8 per cent for Essential Water, which is much more accurate reflection of Essential's cost of debt based on its efficient staggered portfolio approach to debt management.

We do not support IPART's stance that the use of the RBA data should be delayed and only used for reviews commencing on 1 July 2014 and consider that the RBA data should apply to the Essential Water final decision on the basis that:

- IPART considers the use of RBA data to be preferable to IPART's previous methodology
- Essential Water has consistently supported the use of RBA data in our regulatory Submissions for both IPART and the AER
- the RBA data is available to calculate a cost of debt for the final water decision
- IPART has used its new WACC methodology for the current review. It is therefore entirely appropriate to use the RBA data at the same time
- it is entirely arbitrary to select a commencement date of 1 July 2014 for the use of RBA data on the basis that it aligns with the commencement of new reviews. It is more appropriate to commence the use of RBA data at the same time as the new determination takes effect, ie: the Essential Water water determination on 1 July 2014.

Without any further evidence to suggest that the use of RBA data could not be implemented for the Essential Water review, we view the delayed implementation of IPART's preferred approach to the cost of debt to be arbitrary and inconsistent.

Recommendation: IPART moves to its preferred approach to calculating the cost of debt using RBA data for the Essential Water final decision for the regulatory period commencing 1 July 2014.

[8] IPART Fact Sheet – *New approach to estimating the cost of debt – Use of the RBA's corporate credit spreads* – February 2014. Table 2.3.