

11 REVENUE REQUIREMENT

The MARR is used to determine the maximum prices that TasWater can charge for regulated services such that, if the amount for each of the regulated prices, fees and charges (see Chapter 13 of this Final Report) were to be applied to the demand for each service, the resultant aggregate revenue would not exceed the MARR.

TasWater's MARR for each year of the third regulatory period is calculated as follows:

$$\text{MARR} = \text{Return on Capital} - \text{Inflation adjustment} + \text{Tax allowance} + \text{Regulatory Depreciation} + \text{Opex}$$

11.1 TasWater's proposed regulated revenue

TasWater's proposed building block components and estimated MARR for each year of the third regulatory period are shown in Table 11.1.

Table 11.1 TasWater's proposed maximum allowed regulated revenue (\$'000s)

	2018-19	2019-20	2020-21
Opex	174 781	178 691	185 260
Regulatory Depreciation	109 967	114 906	119 859
Return on capital	157 908	165 021	171 852
Inflationary adjustment	-71 178	-73 377	-83 864
Working capital	1 585	1 621	1 661
Tax allowance	22 021	23 514	24 954
Total regulated revenue	395 085	410 378	419 722

11.2 Economic Regulator's regulated revenue decision

As discussed in Chapters 7, 8, and 10 the Economic Regulator has determined alternative values for opex, regulatory depreciation and return on capital.

11.2.1 Inflation adjustment

In previous investigations the Economic Regulator used a pre-tax real WACC which is net of inflation. As explained in Chapter 9, for the third regulatory period the Economic Regulator has accepted TasWater's proposal to use a post-tax nominal vanilla WACC which includes compensation for inflation. The RAB is also adjusted annually for inflation through the RAB roll forward (as discussed in Chapter 10). Therefore, to avoid double counting for the impact of inflation, the inflationary adjustment of the RAB roll forward must be removed. As proposed in its Draft Report, and as maintained in this Final Report, the Economic Regulator accepts TasWater proposal to include an adjustment for inflation in its regulated revenue build up.

Based on the Economic Regulator's RAB roll forward calculations in Table 10.2 the Economic Regulator has calculated the adjustment for inflation for this Final Report as shown in Table 11.2.

Table 11.2 Economic Regulator's adjustment for inflation (\$'000s)

	2018-19	2019-20	2020-21
Inflation adjustment	- 71 130	- 73 772	- 76 314

11.2.2 Tax allowance

TasWater proposed including a tax allowance as a component of its regulated revenue build up. TasWater states that the tax allowance for regulatory purposes is based on the total regulatory revenue which would create a circularity issue as the tax allowance is one of the components of the regulatory revenue. To avoid this, TasWater proposed calculating tax only on the return on equity component of the return on capital component of the regulated revenue. TasWater justified this calculation on the basis that its proposed prices will not recover the total revenue allowed and actual profit will be lower than the profit implied by the regulatory tax calculation.

The Economic Regulator agreed in its Draft Report that by changing to a post-tax nominal vanilla WACC there is a need to include a tax allowance component in the regulated revenue build up.

The rationale for the post-tax building block revenue approach is that calculating a separate tax allowance in the revenue build up enables a more accurate estimate of an efficient benchmark business' tax liability.

The tax allowance is calculated using taxable revenue which is calculated as:

Regulated revenue

- forecast opex (as determined for the maximum revenue allowance build up)
- interest (cost of debt x gearing ratio x RAB)
- tax depreciation (determined using a Tax Asset Base (TAB))
- applicable tax losses

multiplied by the corporate tax rate (adjusted for gamma).

Tax depreciation and regulatory depreciation and regulated revenue and taxable revenue are generally not the same. The applicable effective tax rate for the regulated business may therefore be significantly different from the corporate tax rate. Consequently, the use of the corporate tax rate may result in a regulated business being over compensated for its tax liabilities.

To enable regulators to calculate a tax allowance the regulated business must create a Tax Asset Base (TAB) in addition to the RAB. The TAB must include the value of the regulated assets for tax purposes and therefore will differ to the DORC valuation used for the calculation of the RAB. A regulated business must also determine the value of any accumulated tax losses and apportion the tax losses between its regulated and unregulated activities. The TAB is then used to calculate tax depreciation which will differ from the value of regulatory depreciation. The difference is due to the different asset values and methods used to depreciate assets for tax purposes.

Information required to establish a TAB includes:

- a commencement date, such as the date of corporatisation;
- the value of regulated assets for tax purposes at the commencement date; and
- the applicable tax depreciation rate or effective life of the assets for taxation purposes.

Like the RAB, the TAB would need to be rolled forward every year since the commencement date incorporating the relevant tax depreciation provisions and actual capex and disposals. Capex would be recognised on an 'as commissioned' basis to provide an actual estimate of tax depreciation for rolling forward the TAB.

The ability of a business to claim accelerated depreciation and accumulated tax losses will result in the TAB differing from the RAB with the difference increasing each roll forward period. From past experience⁷⁸, the Economic Regulator is aware that establishing a TAB using historical data is a time consuming and complex exercise and may require certain assumptions to be made where the information is incomplete.

TasWater has not created a TAB and has instead proposed that tax depreciation equal regulatory depreciation and has assumed no applicable tax losses. Therefore, where the tax and regulatory depreciation amounts are the same and there are no applicable tax losses, TasWater proposed that the taxation allowance with respect to New assets is calculated as follows:

$$\text{Return on equity (post-tax)} \times T / (1 - T(1 - \gamma))$$

Where:

T = corporate tax rate

Gamma = value of imputation credits

This formula can be re-written as follows to determine the tax allowance with respect to Existing assets:

$$\text{Return on equity (pre-tax)} \times T(1 - \gamma)$$

As noted above TasWater is yet to develop a TAB. However, a TAB will need to be in place prior to the start of the fourth regulatory period to support the use of a post-tax WACC. By raising this issue in this Final Report, the Economic Regulator's objective is to ensure TasWater is aware of the requirement to develop a TAB and can start its development during the third regulatory period. The Economic Regulator will require the creation of the TAB through other regulatory mechanisms.

Based on the values calculated in Chapters 9 and 10 and the above formula, the Economic Regulator's tax allowance calculation and resultant tax allowance for the this Final Report values are shown in Table 11.3.

⁷⁸ See, for example, the Deloitte report to the AER, Aurora Energy Pty Ltd, Asset Review, 3 May 2011.

Table 11.3 The Economic Regulator's tax allowance calculation (\$'000s)

	2018-19	2019-20	2020-21
Gearing	0.60		
Equity % (1-gearing)	0.40		
Existing assets	2 531 550	2 533 408	2 534 413
Equity Existing assets (assets x equity %)	1 012 620	1 013 363	1 013 765
New assets	724 069	838 729	970 323
Equity New Assets (assets x equity %)	289 628	335 492	388 129
<i>Return on Equity (RoE) rates</i>			
Existing assets (pre-tax)	3.00%		
New assets (post-tax)	7.10%		
Conversion factor (1/(1-30%))	1.43		
New assets (pre-tax) (post tax rate x conversion factor)	10.25%		
<i>RoE (pre-tax)</i>			
Existing assets (Equity x pre-tax RoE rate)	30 379	30 401	30 413
New assets	29 394	34 049	39 391
Total RoE	59 773	64 450	69 804
<i>Tax on RoE</i>			
Corporate Tax rate	30.00%		
Gamma	40.00%		
Tax rate for RoE (30% x (1-gamma))	18.00%		
Tax allowance [(Tax rate for RoE) x Total RoE]	10 759	11 601	12 565

The Economic Regulator will require TasWater to develop, during the third regulatory period, a Tax Asset Base to support the use of a post-tax WACC.

11.2.3 Working Capital Allowance

In its proposed PSP TasWater proposed including a working capital allowance as an additional, separate building block component. The purpose of working capital is to provide short term liquidity. TasWater proposed the allowance in order to compensate it for the opportunity cost of holding additional funds to cover the delay between paying suppliers and receiving revenue from customers.

The Economic Regulator noted in its Draft Report that both the ESC of Victoria and the AER consider a working capital allowance to be unnecessary due to the timing of cash flows for the businesses that they regulate. Neither regulator has approved a working capital allowance since 2000 and 2002 respectively.

The Queensland Competition Authority (QCA) has allowed SunWater a working capital allowance. However, in its report to the QCA, Deloitte notes that SunWater has only 22 bulk water scheme customers compared to electricity and gas distributors who have thousands of customers. SunWater may experience cash flow issues due to its small number of customers such that a working capital allowance was considered appropriate.⁷⁹

A working capital allowance has not been part of the building block approach used in the two previous regulatory periods for TasWater and its predecessor regional corporations. Further, unlike Sun Water, TasWater has a considerable customer base, billed on a quarterly basis and the fixed charge components of regulated tariffs are billed in advance. The Economic Regulator concluded that TasWater has not demonstrated that it has liquidity issues that would warrant the inclusion of a working capital allowance.

11.2.3.1 Issues raised during consultation on the Economic Regulator's Draft Report

In its submission TasWater stated that it reads meters “at a constant rate over the quarter and the bill is sent after the meter is read” and “Customers have 35 days to pay their bill after receiving it”. TasWater contends that it is the gap between the service being provided and the receipt of cash for that service that needs to be funded through the addition of a working capital allowance component in the regulated revenue.

TasWater also stated that where a mid-year revenue assumption is used for financial modelling purposes (as used by TasWater) then a working capital allowance is required and referred to regulators such as IPART that use this approach.

11.2.3.2 Economic Regulator's decision

Working Capital refers to the cash required for the day to day running of a business. TasWater's 2016-17 Annual Report (and previous annual reports) states that it collects revenue in 14-31 days of issuing an invoice and generally pays trade creditors within 30 days of recognition. Even allowing for revenue impairment TasWater has sufficient cash to meet its working capital requirements.

With regards to the timing of cash flows, IPART states that a working capital allowance is justified on the basis of the “strict time assumptions” it uses in its financial model. Specifically, IPART calculates mid-year values for the building block regulated revenue requirement by discounting both the depreciation and return on assets by six months at the applicable WACC. The Allen Consulting Group's 2002 report for the AER⁸⁰ shows, based on empirical evidence, that a mid-year revenue assumption for financial modelling purposes provides sufficient revenue to meet a regulated entity's operational requirements.

TasWater's submission does not provide any further justification for a working capital allowance to be provided and the Economic Regulator has not included a Working Capital Allowance in TasWater's MARR.

The Economic Regulator has not included a Working Capital Allowance in TasWater's MARR.

⁷⁹ Deloitte report to the Queensland Competition Authority, *SunWater - Working Capital Allowance, Final Report, 23 August 2011*, page 11.

⁸⁰ The Allen Consulting Group, *Working Capital Relevance for the Assessment of Reference Tariffs*, 2002.

11.3 Maximum Allowed Regulated Revenue

The Economic Regulator's calculation of values for each building block component and MARR for each year of the third regulatory period are outlined in Table 11.4.

Table 11.4 Economic Regulator's calculation of TasWater's Maximum Allowed Regulated Revenue (\$000s)

	2018-19	2019-20	2020-21
Opex	171 153	173 855	179 160
Depreciation	90 111	95 039	99 505
Return on capital	142 341	149 084	156 778
Inflationary gain offset	- 71 130	- 73 772	- 76 314
Tax allowance	10 759	11 601	12 565
Maximum allowed regulated revenue	343 234	355 806	371 694