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Queensland Competition Authority

SunWater Administration Cost Review Phase 2

27 March 2011

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John Hall
The Chief Executive Officer
Queensland Competition Authority
GPO Box 2257
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27 March 2011

Dear Mr Hall

RE: SunWater Admin Costs – Phase2 Review

Deloitte is pleased to submit this draft report to the Queensland Competition Authority as part of the SunWater Irrigator Price Review process. Please do not hesitate to contact me directly should you wish to discuss.

Yours sincerely

[redacted]

Kumar Padisetti
Partner
Energy and Infrastructure Advisory

Contents

Note on Draft Report

This Draft report has been completed to provide input into the second round consultation process for the 2011-2016 Irrigator Price Setting Process. Given the tight timeframes to complete analysis and the detailed nature of the report's content this report represents our initial findings only. Some sections of this report and analysis still require completion - where relevant we have noted this in the report. We acknowledge that some of the report's findings may change between the draft and final versions, based on additional information that becomes available and subsequent analysis.

This draft report has borrowed from the work undertaken by SAHA in the Stage 1 report. We have not always directly quoted the SAHA report and would like to make a general acknowledgment of this here.

Statement of Responsibility

This report was prepared for the Queensland Competition Authority as part of the 2010-11 irrigation price review, for the purpose of assessing the efficiency of SunWater's proposed administration costs and the appropriateness of the allocation methodology used to apportion administration costs to irrigation customers. In preparing this Report we have relied on the accuracy and completeness of the information provided to us by the Queensland Competition Authority and SunWater and from publicly available sources.

We have not audited or otherwise verified the accuracy or completeness of the information. We have not contemplated the requirements or circumstances of anyone other than the Queensland Competition Authority.

The information contained in this Report is general in nature and is not intended to be applied to anyone's particular circumstances. This Report may not be sufficient or appropriate for your purposes. It may not address or reflect matters in which you may be interested or which may be material to you.

Events may have occurred since we prepared this Report which may impact on it and its conclusions.

We do not accept or assume any responsibility to anyone other than Queensland Competition Authority in respect of our work or this Report.

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1 Executive Summary

The Queensland Competition Authority ('Authority') has been directed by the Queensland Premier and the Treasurer ('Ministers') to develop irrigation prices to apply to 22 of SunWater's Bulk Water Supply Schemes and 8 Distribution Supply Schemes ('WSS') from 1 November 2011 to 30 June 2016.

The Ministerial Notice requires that bulk water supply and irrigation channel prices be set so as to provide a revenue stream that allows SunWater to recover:

- its efficient operational, maintenance and administrative costs;
- prudent and efficient expenditure on renewing and rehabilitation existing assets, through a renewals annuity; and
- a commercial return of and on prudent capital expenditure for augmentation commissioned on or after 30 September 2011

The Authority has sought external, expert advice from Deloitte Touche Tohmatsu ('Deloitte') in response to the Minister's Notice. In particular, independent expert advice was sought to carry out an assessment of the prudency and efficiency of SunWater's proposed administration costs, and the reasonableness of SunWater's allocation of administration costs to WSS and to medium and high priority customers. This draft report represents our analysis and findings to date including:

1. An assessment of the reasonableness and prudency of SunWater's cost base through a benchmarking and case study exercise. In addition we have undertaken a bottom-up 'needs based' assessment of the services provided and associated labour costs to help inform the benchmarking exercise
2. An assessment of the allocation of administrative costs to scheme and segment level. We reviewed SunWater's proposed allocation methodology and completed an assessment of the appropriate drivers for each administrative function.

Overall SunWater's cost structure benchmarked within expected global benchmark ranges. Our MAE (missions, activities and end-products) analysis did not identify any major structural issues with the delivery of services. Our draft analysis indicates there is an opportunity to reduce FTEs by 3.4 – 4.0 % however this will be refined through additional analysis prior to our final report. The main opportunities identified are within the Finance, HR, ICT and Health Safety, Environment and Quality (HSEQ) functions.

At the time of this draft report some analysis remains to be completed to enable firm recommendations on a proposed allocation methodology to be made. While we have identified that SunWater's selected cost driver 'direct costed labour' is appropriate for the allocation of some administrative cost functions, it is not always an appropriate choice when assessing individual functions. That said our analysis to date is preliminary only and results are largely for discussion purposes. A recommendation of the proposed allocation methodology will be included in the final report –section 4 provides our initial analysis and findings to date.

2 Introduction

2.1 Background to the Price Setting Review

The Queensland Competition Authority ('Authority') has been directed by the Queensland Premier and the Treasurer ('Ministers') to develop irrigation prices to apply to 22 of SunWater's Bulk Water Supply Schemes and 8 Distribution Supply Schemes ('WSS') from 1 November 2011 to 30 June 2016. A copy of the Ministers' Referral Notice (the Notice) is available at http://www.qca.org.au/water/Sun-Irrig-Price/index.php

The Notice requires that bulk water supply and irrigation channel prices be set so as to provide a revenue stream that allows SunWater to recover:

- its efficient operational, maintenance and administrative costs;
- prudent and efficient expenditure on renewing and rehabilitation existing assets, through a renewals annuity; and
- a commercial return of and on prudent capital expenditure for augmentation commissioned on or after 30 September 2011

The Notice also requires the Authority to adopt tariff groups as proposed in SunWater's Network Service Plans (NSPs), recommend regulatory arrangements to manage the risks associated with allowable costs outside the control of SunWater, take into account the level of service provided by SunWater and have regard for the legitimate commercial interests of SunWater. The Notice has directed the Authority not to consider the recovery of costs associated with dam safety upgrades and any return on existing rural irrigation assets as of 30 September 2011.

This is the first time the Authority has been directed to undertake a price review of SunWater's business; the previous irrigation price path (2006-2011) was agreed through a consultative process between SunWater and a representative group of SunWater's stakeholders (called the State-wide Irrigation Pricing Working Group or Tier 1) in 2005.

The 2011-2016 irrigation price setting process commenced in mid 2010 and the Authority is required to recommend draft irrigation prices no later than 30 June 2011. At the time of this report SunWater had provided the Authority with NSPs for each bulk and distribution service contract in the 22 WSS of relevance to irrigators. The NSPs, at a high level, partially outline the administrative costs to be incurred by each WSS over the price setting period. In response to the release of the NSPs, both the

Authority and a number of Irrigators have requested additional detail from SunWater.

To date no prices have been presented by either the Authority or SunWater with respect to the 2011–2016 price path.

2.2 Terms of Reference and Approach

The Authority has sought external, expert advice from Deloitte Touche Tohmatsu ('Deloitte') in response to the Minister's Notice.

In particular, independent expert advice was sought to carry out an assessment of the prudency and efficiency of SunWater's proposed administration costs, and the reasonableness of SunWater's allocation of administration costs to WSS and to medium and high priority customers. This has been outlined in a list of six requirements including:

- Identification of the relevant components of administration cost
- Reconciliation of total administration cost in NSPs to relevant cost components
- Identification of cost objects (e.g., customer groups)
- Bottom-up needs based assessment of administration functions using Mission, Activities and End Products (MAE) analysis
- Assessment of administration cost projects against benchmarks, identifying efficiency improvements, and reviewing escalation rates
- Review of SunWater's administration cost allocation methodology.

Our approach can be broken into two distinct pieces of analysis:

1. Assessing the reasonableness and prudency of SunWater's cost base
2. Assessing the allocation of administrative costs to scheme segments and customers.

Assessing the Reasonableness and Prudency

In assessing the reasonableness and prudency of SunWater's cost base we have undertaken a comprehensive benchmarking exercise at a functional and sub-functional level against a benchmark cohort of 74 international utilities. We have also assessed SunWater's administrative costs against local water and electricity utilities. This has been supported by a detailed assessment of the services being provided by SunWater both internally and externally through a Mission, Activities, End Product (MAE) exercise, which has assisted in normalising benchmarks and identifying non-core activities. The MAE exercise involved interviews with senior management across all major administrative functions. See Section 3.4.2 for further details.

Assessing the Allocation Methodology

To assess the proposed allocation methodology we worked with SunWater to understand and document the cost allocation methodology being applied to administrative costs within SunWater's financial model. See Appendices B and C for

worked examples of the methodology. We assessed the proposed allocation drivers against a range of allocation principles and reviewed how other utilities are currently allocating cost. We also completed a detailed assessment of the key value drivers for each administrative function to identify the most suitable allocation driver. Our final analysis is still to be completed for the final report. See section 4.4.1 for a more detailed explanation.

3 SunWater's Administrative Costs

3.1 SunWater's Services

SunWater is a Government Owned Corporation (GOC) charged with facilitating the provision of safe and reliable bulk water services to the people of regional Queensland. SunWater is governed by the Water Act 2000, under which it is a registered 'Large Service Provider for Water Supply and Sewerage Services'. It is licensed to provide bulk, irrigation, and retail water services as well as drainage and sewerage services.

As the largest water service supplier in the state, SunWater owns and operates a network of water infrastructure, as well as providing consulting expertise in water infrastructure design, delivery and management. Its core activities include:

- Bulk water storage and distribution
- Water treatment, reticulation and drainage
- Water infrastructure development
- Water facilities management
- Water accounting and management services
- Specialist consultancy services
- Any activity likely to complement or enhance the above (such as hydro-electricity development).

These core activities are determined by shareholder requirement and/or competitive advantage according to SunWater's experience and skill base.[1] SunWater does not charge for water use as it is only responsible for the delivery of water subject to its Resource Operating Licences (ROLs), or (in some cases) Interim Resource Operating Licences (IROLs). ROLs and IROLs govern the water infrastructure and operating arrangements, water allocation, management and sharing and also water monitoring and reporting requirements for each WSS.

SunWater, in addition to maintaining the infrastructure assets and ensuring Water Allocation Entitlements (WAEs) delivery under the ROL/IROL's, is required to meet a number of compliance reporting requirements. While most compliance reporting is

[1] *Statement of Corporate Intent 2008-09* prepared by the directors and management of SunWater for the shareholding Ministers

also required for the prioritisation of normal business operations (under the ROL/IROL's) there are some requirements that fall outside the scope of normal business operations. These range from the collection and management of customer data to reporting of hydrographical waterway flow rates to the Bureau of Meteorology and compliance reporting of usage data to the Murray-Darling Basin Authority.

SunWater's business is split into 62 Service Contracts where a Service Contract represents a largely independent service offering to customers. Service Contracts cover the full range of services provided by SunWater including bulk water, distribution, hydro generation, commercial pipelines and water treatment facilities.

Only 30 of SunWater's 62 Service Contracts are included in this price setting process and of the total costs allocated to these 30 Service Contracts only a portion is of relevance to Irrigators. The purpose of this engagement is to assess the efficiency and prudency of the costs allocated to Irrigators over the 2011-2016 price setting period.

Table 3-1 and Table 3-2 below summarise the number and type of service contracts in SunWater.

Table 3-1 Service Contract Types

Service Contract Type	SunWater Service Contracts	Irrigator Service Contracts
Bulk Water	28 (includes 23 service contracts in WSS and 5 external service contracts)	22 (of the 23 WSS only Julius Dam does not service Irrigators)
Irrigation Distribution	9	8 (relate to Irrigators)
Commercial Pipeline	13	-
3rd Party Distribution	2	-
Hydro Generation	2	-
Water Treatment	3	-
Metering	1	-
Water Trader	1	-
Infrastructure Development Projects	2	-
Consulting Projects	1	-
TOTAL	**62**	**30**

Table 3-2 List of Service Contracts by Water Supply Scheme and External Delivery[2]

Water Supply Scheme and Other	Internal or External Infrastructure	Bulk Water	Distribution	Commercial Pipeline	3rd Party Distribution	Hydro Generation	Water Treatment	Metering	Development Projects	Water Trader	Consulting
Barker Barambah	Internal	Barker Barambah									
Bowen Broken	Internal	Bowen Broken		Collinsville Pipeline	Eungella Offtake Newlands Offtake						
Boyne River and Tarong	Internal	Boyne River & Tarong		Tarong Pipeline							
Bundaberg	Internal	Bundaberg	Bundaberg								
Burdekin-Haughton	Internal	Burdekin-Haughton	Burdekin	Burdekin Moranbah Pipeline			Burdekin Town Water				
Callide Valley	Internal	Callide Valley									
Chinchilla Weir	Internal	Chinchilla Weir									
Cunnamulla Weir	Internal	Cunnamulla Weir									
Dawson Valley	Internal	Dawson Valley	Dawson								
Eton	Internal	Eton	Eton								
Julius Dam	Internal	Julius Dam									
Lower Fitzroy	Internal	Lower Fitzroy		Stanwell Pipeline							
Lower Mary River	Internal	Lower Mary River	Lower Mary								
Macintyre Brook	Internal	Macintyre Brook									
Maranoa	Internal	Maranoa									
Mareeba-Dimbulah	Internal	Mareeba-Dimbulah	Mareeba			Tinaroo Hydro	Mitchuba Town Water				
Nogoa-Mackenzie	Internal	Nogoa-Mackenzie	Emerald	Blackwater Pipeline	Gregory Offtake Oaky Creek Offtake Saraji Offtake						
Pioneer River	Internal	Pioneer River									
Proserpine River	Internal	Proserpine River									
St George	Internal	St George	St George								
Three Moon Creek	Internal	Three Moon Creek									
Upper Burnett	Internal	Upper Burnett									
Upper Condamine	Internal	Upper Condamine									
Awoonga Callide	Internal			Awoonga Pipeline							
Goondicum Pipeline	Internal			Goondicum Pipeline (not commissioned)							
Burnett Water	External Subsidiary	Paradise Dam/Kiera Weir				Mini Hydro					
Northwest Pipeline	External Subsidiary			Northwest Pipeline							
Eungella Pipeline	External Subsidiary			Eungella Pipeline Eastern Pipeline Southern Pipeline							
External Service Contracts	External	4 Service Contracts	1 Service Contract	4 Service Contracts			1 Service Contract	1 Service Contract			
ID - Projects	Internal								D - Projects		
ID - Feasibilities	Internal								D - Feasibilities		
ID - Water Trader	Internal									ID - Water Trader	
ID - Consultancies	External										D - Consultancies

[2] SAHA – Assessment of SunWater's Administration Costs

Furthermore Table 3-3 provides a summary of the major operational metrics by SunWater WSS or external service. In 2009, SunWater delivered 1.05 million ML of water across all WSS to some 4,900 customers, across regional Queensland. SunWater maintains and operates:

- 19 major dams
- 63 weirs and barrages
- 80 major pumping stations
- 2,500km of pipelines and open channels
- 730km of drains. [3]

Table 3-3 Asset and Customer Metrics by WSS[4]

Water Supply Scheme and Other	Internal or External Infrastructure	Major Dam Capacity '000 ML	Number of Customers	Customer Allocations '000 ML	Pipeline KM	No. of Pump Stations
Barker Barambah	Internal	136	172	34		
Bowen Broken	Internal	119	56	38	120	3
Boyne River and Tarong	Internal	204	155	44	95	3
Bundaberg	Internal	937	1,093	209		
Burdekin-Haughton	Internal	1,868	392	774	218	4
Callide Valley	Internal	151	139	24		
Chinchilla Weir	Internal	10	34	4		
Cunnamulla Weir	Internal	5	26	3		
Dawson Valley	Internal	67	153	58		
Eton	Internal	66	303	53		
Julius Dam	Internal	108	3	48		
Lower Fitzroy	Internal	36	24	27	25	1
Lower Mary River	Internal	17	187	26		
Macintyre Brook	Internal	70	96	25		
Maranoa	Internal	not listed	4	1		
Mareeba-Dimbulah	Internal	439	1,132	159		
Nogoa-Mackenzie	Internal	1,344	364	203	57	3
Pioneer River	Internal	165	22	76		
Proserpine River	Internal	491	91	60		
St George	Internal	100	160	75		
Three Moon Creek	Internal	89	92	15		
Upper Burnett	Internal	193	157	31		
Upper Condamine	Internal	106	101	34		
Awoonga Callide	Internal		29		53	3
Goondicum Pipeline	Internal				Not commissioned	Not commissioned
TOTALS		**6,720**	**4,985.0**	**2,020.3**	**568.0**	**17.0**

3.2 Provision of Services

SunWater's organisational structure has been developed along functional lines. A Corporate group (largely based in Brisbane head office) provides HR, Finance, Legal, Procurement and IT support; an Infrastructure Management group is responsible for managing and maintaining SunWater's assets (dams, waterways, pumping stations, weirs) including managing customer water account data and water customers; and an Infrastructure Development group is responsible for greenfield infrastructure developments. There is also a Strategy and Reporting group and a Health, Safety and Environmental group reporting directly to the CEO.

[3] Source: SunWater Annual Report 2008-09

[4] Source: SunWater Annual Report 2008-09 and SunWater website http://www.sunwater.com.au/management/management/pump-stations-and-pipelines

SunWater's business is geographically diverse and is supported by Brisbane Head Office and four major Regional Depots in Clare, Eton, Bundaberg and Toowoomba. Within each of the regions there are service centres and depots, including facilities in Ayr, Mareeba, Emerald, Moranbah, Maryborough, Biloela, Mundubbera, Theodore, Goondiwindi, and St George.[5]

SunWater's high level organisational structure is presented in Figure 3-1. This structure reflects the current business structure following the organisational changes undertaken through the recent SLIFI (Stronger, LIghter, Faster Initiative).

Figure 3-1 SunWater Organisational Structure

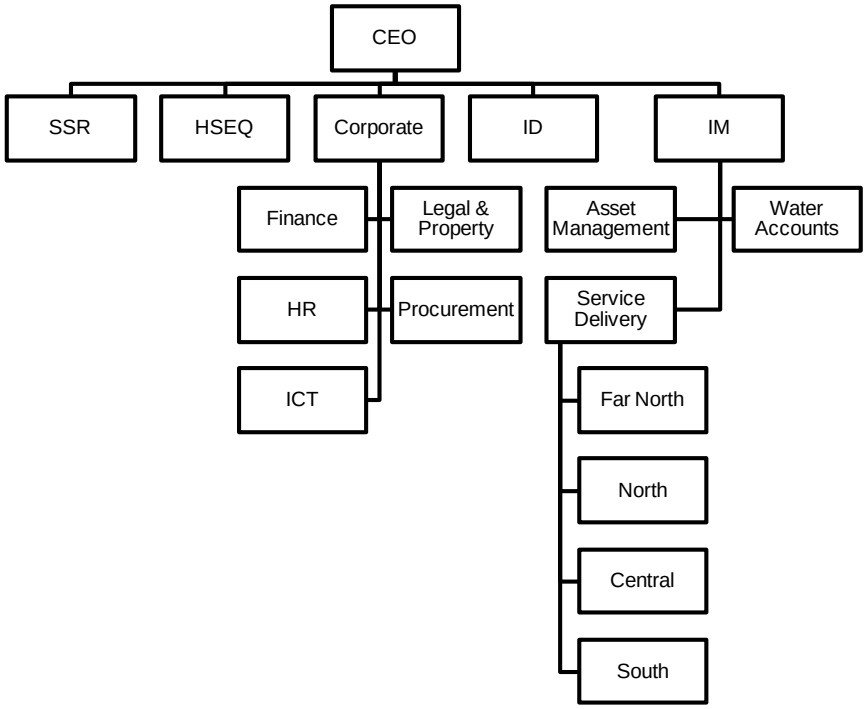


Table 3-4 provides a brief description of the functions of each business unit as well as the number of Full Time Equivalents (FTEs) as at 30 March 2010. A full description of the functions of each business unit is detailed in Section 3.4.

[5] Data from interview conducted on 17/8/10 wi h B Jeppessen, GM Infrastructure Management, SunWater, P McGahan, Strategy and Planning Manager, SunWater and M Judkins and P McCarthy from SAHA

Table 3-4 Summary of Business Units[6]

Business Unit	Function	FTE at March 2011
CEO Office	Oversight of the operations of SunWater. Includes the CEO and SunWater Board. The Internal Auditor also reports directly to the CEO	3.0
SSR – Strategy and Stakeholder Relations	Responsible for water planning, corporate relations and business strategy. SSR are also responsible for strategic external communications such as website and advertising.	12.0
HSEQ – Health, Safety, Environment & Quality	Responsible for all workplace health and safety, environmental issues and quality assurance and management	19.0
Corporate	Finance: Responsible for key activities of accounts payable and receivable, finance reporting and analysis, cash and funds management and budgeting and planning Human Resources: Responsible for workforce planning and strategy, recruitment and exit, training, leadership development and performance management, payroll services, remuneration benefits and advice and managing industrial relations ICT: Responsible for managing all network infrastructure including business systems analysis, infrastructure support (IT and phone), information governance (including hard copy and library function) and IT service desk Procurement: Undertaking major purchases for whole of SunWater (minor purchases undertaken by relevant cost centres) Legal and property: Responsible for legal issues and managing property portfolio such as housing and land-based issues	83.0
ID – Infrastructure Development	Responsible for all new infrastructure projects carried out both internally to SunWater and with external clients, project management and project proposals and business development.	95.2
IM – Infrastructure Management	Asset management: Responsible for strategic asset management (asset strategy and planning and asset performance and compliance) Water Accounts: Responsible for water accounting, ROP/ROL compliance, and customer service (enquiries, customer accounts and contracts). Service Delivery: Responsible for operations and maintenance of WSS	284.5
	TOTAL	**496.7**

3.3 Adminstrative Costs Summary

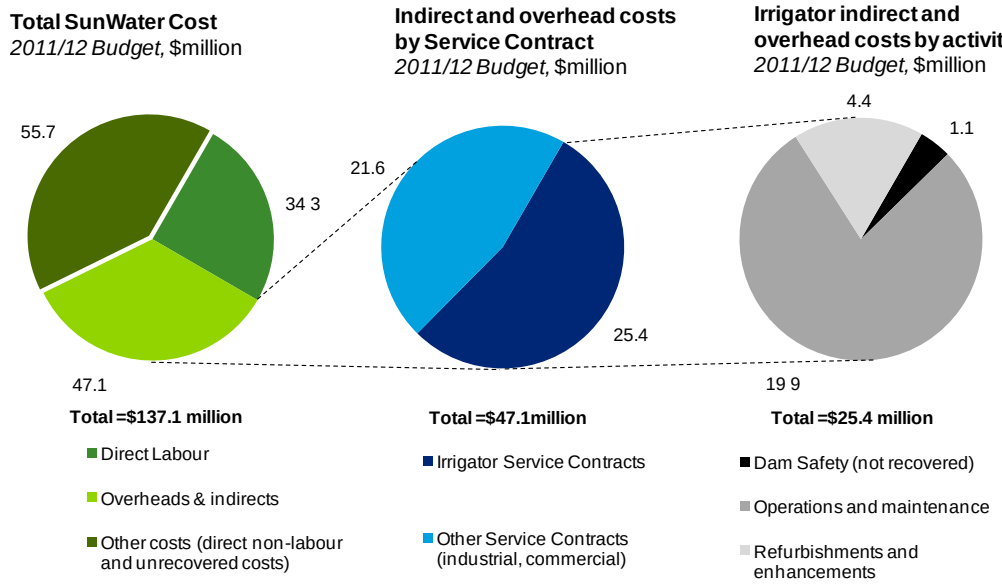
A key aim of this paper is to assess the reasonableness and efficiency of SunWater's administrative costs. In the following sections we provide a breakdown of these costs including the relative proportion of total administrative costs allocated to Irrigation Service Contracts and the make-up of administrative costs split between local overhead, Brisbane overhead and indirect cost pools.

[6] SunWater organisa ion charts as provided by SunWater; MAE exercise with senior SunWater management

Figure 3-2 maps the proportion of total SunWater expenditure (in 2011/12 budget) to the WSS of relevance to Irrigators. Note that these costs apply to both Irrigator's and non-Irrigators. The chart shows 34% of SunWater's expenditure is classified as administrative and 54% of total administrative costs are allocated to SunWater's 30 Irrigation WSS (equal to $25.4m in 2011/12).

Of the costs allocated to the 30 Irrigator WSS only $24.3m is to be recovered as $1.1m relates to dam safety upgrades and as per the Ministerial Directive this is not to be recovered through Irrigator tariffs.

Figure 3-2 Allocation of Total Expenditure to Irrigator WSS



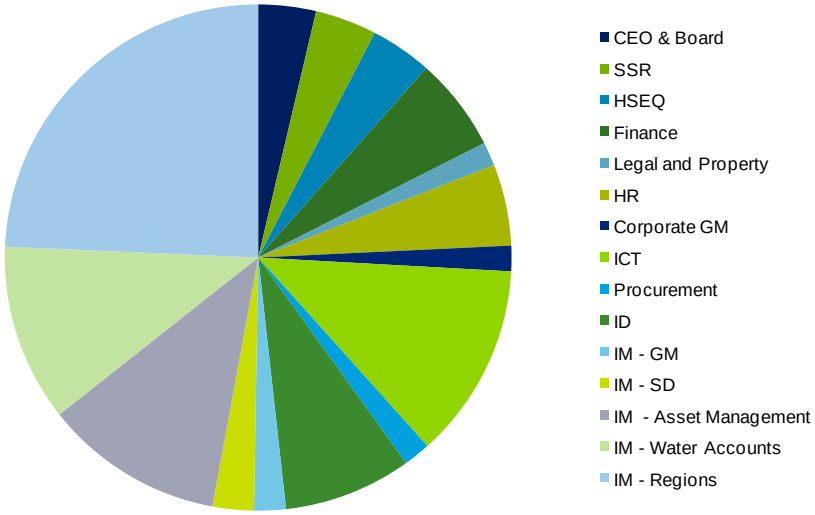
A detailed explanation of the allocation methodology is presented in Section 4, including the explanation of the different types of administrative costs: local overhead, Brisbane overhead and indirect costs.

It is important to note that SunWater's total administrative costs include costs directly associated with the administrative functions (e.g., HR, Finance, Asset Management) not directly charged to the business and also the non utilised labour of employees in Infrastructure Management and Infrastructure Development. Utilisation rates of workers in the regions (Infrastructure Management) are assumed to be approximately 77 percent and as a result a significant amount of labour from the regional offices (in addition to the depot manager and schedulers) is included in the administration cost total. This is considered unusual and inflates SunWater's administrative costs relative to other benchmarks.

The following chart shows SunWater's total administration costs of $51.2 million disaggregated by function. This total is reconciled with the $47.1 million of administration costs allocated to Service Contracts by subtracting unrecovered costs of $2.2 million and ICT desktop and network costs of $1.9 million. The latter represents costs incurred by ICT that remain in ICT's primary costs but are also charged to functions based on their number of desktops, which need to be removed from total administration costs to eliminate double counting. An explanation of unrecovered costs is provided in Appendix B (Note K).

The chart demonstrates that the largest components of administration costs are ICT costs of $6.4 million and the Infrastructure Management Regions' costs of $12.5 million. The ICT costs are explained by the large fixed costs this function incurs in order to maintain and develop SunWater's key ICT systems, such as SAP. The significant costs in the Regions reflects the fact that these costs include the non-utilised labour costs of the staff employed in these jurisdictions, as well as any non-labour costs such as materials that cannot be directly charged to contracts. The bulk of Infrastructure Management's staff are employed in the Regions, including Area Operations Managers, schedulers and administration support and technical employees. The chart also shows that the relatively minor contributors to total administration costs are Legal and Property, Corporate General Manager and Procurement.

Figure 3-3 Breakdown of Administrative Cost by Function (2011/12) $million



Total = $51.2m

Our analysis has focused on the 2011/12 forecast as this is held largely constant over the price path of 2011/12 to 2015/16 other than to grow individual cost items by assumed inflation rates. We have reviewed these inflation rates separately (see section 3.6) and are of the opinion that they are reasonable.

Note in the above cost allocation a portion of the IM-Regions cost includes residual (forecast non-utilised) time for non administrative staff in the regions. We have not assessed the reasonableness of this non-utilised time as it is of more relevance to the engineering review.

3.4 Assessment of SunWater's Administrative Costs

In assessing the efficiency of SunWater's proposed administrative costs two discrete but complementary exercises were undertaken. The first was an MAE analysis (missions, activities and end-products) and the second benchmarking of specific SunWater activities (identified through the MAE) against an internal Deloitte database. In this section we provide an overview of the analysis completed and present the results of the both the benchmarking and MAE exercises.

We note the combined MAE, case study and benchmarking exercises highlight possible areas of efficiency improvement, however they are indicative only.

3.4.1 Benchmarking Overview

We have completed a benchmarking exercise for SunWater's administrative functions where a comparable benchmarking group exists. The particular benchmarking database used in this exercise comprises 74 electricity, gas and mixed service utilities from the US. This was the best benchmark data on sub-functional (and even functional) level available. Other benchmarks from rural water utilities in Australia can be obtained from the National Performance Report 2008-09 of rural water utilities, however the data is not granular enough to be useful in an efficiency exercise, only providing a figure for total administration costs as a proportion of total operating costs.

We have based our benchmarks on labour (e.g., number of FTEs per 100 employees) as opposed to total cost or asset value or any number of other metrics. This has been to avoid issues with different currencies, timing issues and inherently different pay and cost environments in our benchmark group. While our database allows a full range of metrics to be calculated (including benchmarks per customer, per dollar of cost, per unit output) per employees is the best denominator to use for administrative functions as they are largely servicing internal customers. Where this is not the case we have identified the relative strength of the benchmark to be relied upon.

The Deloitte utility database is considered appropriate for the following reasons:

- The large number of utilities in the dataset allows a good distribution to benchmark against
- The database has detailed data down to the sub-functional level for administration costs. There is no publicly available information that has data for any type of utility down to the functional let alone sub-functional level. The most detailed data for utilities in Australia is the National Performance Report which has data for total administration costs and for total operating costs
- Using FTEs as the comparator, removes differences in remuneration scales and also differences in foreign exchange and timing issues
- The utilities in the benchmark database are reasonable comparators for SunWater as the utilities:
    - Provide essential services, therefore are often regulated to ensure adequate service levels and prudent expenditure – and may have significant compliance requirements
    - Are network utilities with large asset bases and large areas of land (easements) to manage
    - Have bulk supply and distribution components of the business
    - Are generally monopoly services with services to defined geographic region
    - Have similar revenue cycles with meter reading and billing carried out on a regular basis (typically quarterly), therefore similar cash flows patterns
    - Have similar cycles of expenditure with operating costs following seasonal patterns (peak and low seasons), and capital expenditure being 'lumpy'

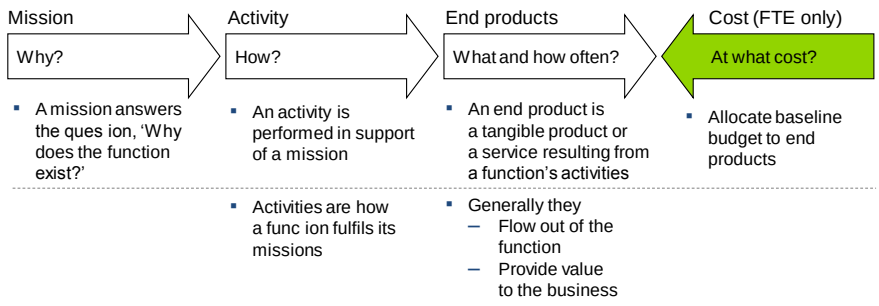
- Need similar finance and treasury skills, for instance have similar capital structures such as gearing ratios and cash flow management issues
- Have similar customer interfaces of call centres and websites, and broadly similar issues to deal with (faults, emergencies, billing)
- Have similar IT applications and therefore IT skills
- Have similar professional skill base of employees with engineers and maintenance crews

- The benchmark utilities also have some important key differences that should be kept in mind in any comparison exercise, such as:
  - Many utilities have a combination of residential and commercial customers (extent not differentiated in database profile), whereas SunWater only has bulk customers (being irrigators, mining companies and urban bulk supply)
  - Utilities in the database typically have much larger FTEs than SunWater, therefore economies of scale could be expected by the benchmark utilities. However it is noted that SunWater is still a large organisation with 494 employees, and above this scale efficiencies diminish – therefore the economies of scale would not be as pronounced as say a small 100 employee utility compared with a utility with 1000 employees.

3.4.2 MAE Overview

The MAE analysis is a 'bottom up', 'needs-based' assessment of costs on a functional level, breaking down each function into sub-functions (missions), activities and end-products (or deliverables). The purpose of the MAE analysis is to gather specific information on how employees spend their time and to understand what costs within a function (labour and non labour) are directed to which activities. An assessment is then conducted on these activities in terms of whether they are 'core' or 'non-core' to the business, and whether the dedicated labour is appropriate. The MAE analysis aims to break down the functions of the business into specific missions, activities and end-products. The below chart illustrates the purpose of the different aspects of the MAE analysis.

Figure 3-4 MAE analysis



In terms of approach, we have carried out a streamlined version of the MAE exercise. MAEs can vary from detailed assessments (involving a large number of employees completing questionnaires about how they spend their time), to streamlined assessments which involve conducting workshops with appropriate persons from each function. The streamlined approach was the most appropriate for assessing the overall efficiency of SunWater

administration costs as it identifies key areas of efficiency opportunity in the timeframe available.

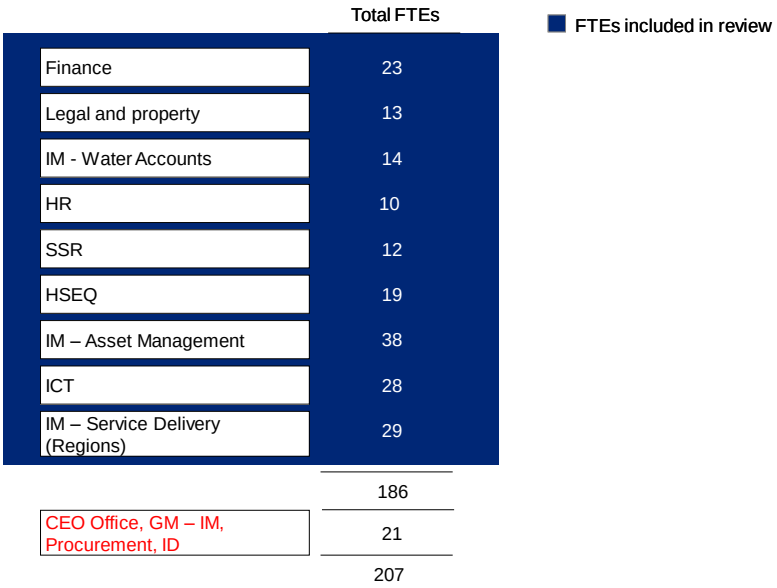
Figure 3-5 Detailed and streamlined MAE

	Detailed MAEs	Streamlined MAEs
Scope	▪ Entire Function	▪ Areas where inefficiency is suspected (ie usually ~75% of function)—but must correspond to a clearly defined cost base—such as a sub-function service
Depth	▪ Detailed—i.e. all end products (e.g. list of all management reports—(as separate end products) individually	▪ Not detailed. End products can be grouped (e.g. groups of managerial reports with similar purpose = 1 end product); can increase detail later as necessary
Data required	▪ Interviews of individual staff ▪ Very detailed time allocations (timesheets)	▪ Estimation/quick interviews of management for time allocation ▪ Sanity check ▪ Interview supervisor for the whole department rather than individual interviews
Accuracy required	▪ High accuracy (±5%)	▪ ±10–20% ▪ Total value of all end products must add to 100% of baseline area covered

In our MAE exercise we have ensured a wide coverage of SunWater functions. Of the total 207 SunWater staff in administration functions, 186 roles (or 90% of the centralised functions) were included in the MAE analysis. Key functions excluded from the exercise were the CEO office, GM for Infrastructure Management (IM), Procurement and Infrastructure Development (ID). These functions were excluded based on their relatively small size. The below chart provides the scope of the MAE analysis.

Unfortunately Deloitte was unable to get access to the full legal and property group of SunWater to conduct the MAE process prior to the submission of this draft report.

Figure 3-6 Scope of SunWater MAE analysis



The information attained through the MAE analysis for the above SunWater functions was acquired through a series of workshops with key staff from each function. Data was collected in a consistent template. The functions and key staff interviewed are provided in the below table:

Table 3-5 SunWater staff interviewed for MAE analysis

Function	Key staff members interviewed
Finance	Geoff White, Margaret Barton, John Thornton
Human Resources	June Dous
Information Communication Technology (ICT)	Mike Minter
Strategy and Stakeholder Relations (SSR)	Tom Vanderbyl, Peter Mcgahan
Health and Safety, Environment and Quality (HSEQ)	Tom Vanderbyl
Asset Management (AM)	Rob Keogh, Phil Miller, Barry Jeppesen
Water Accounts	Donna Hodgon, Petrina Douglas
Service Delivery – Regions *(Admin component only)*	Phil Miller, Barry Jeppesen

3.4.3 Benchmarking and MAE Results

This section presents the results of the benchmarking and MAE exercises. Our analysis includes assessment of the following functions:

- Finance
- HR
- ICT
- Water Accounts
- Strategy and Stakeholder Relations (SSR)
- Health, Safety, Environment and Quality (HSEQ)
- Asset Management
- Service Delivery – Regions

Table 3-6 below summarises the overall findings of the benchmarking and MAE analysis for the administrative functions. Overall our draft analysis indicates a potential efficiency opportunity of 6.15 to 7.15 FTEs (occurring in Finance, HR, ICT and HSEQ), which represents a range of 3.4% - 4% of the FTE's included in the review (MAE analysis and benchmarking).

Table 3-6 Efficiency Opportunities

	FTE				
	Total (current)	Non-core		Efficiency opportunities	Potential FTE saving
Finance	23	1.2	(5%)	▪ Accounts payable	0.5
				▪ Manual payment methods	0.25
				▪ Reporting	1.0
				▪ Facili ies management	0.5
				▪ Fuel card management	0.1
HR	10	1 8	(18%)	▪ Recruitment and exit	0.5 – 1.0
				▪ Industrial Relations	0.5
				▪ Payroll	0.5
Asset Management	38	0.27	(<1%)	▪ No opportunities identified	
ICT	28	0.7	(2 5%)	▪ Service Desk	0.5
				▪ Library and hard file management	0.3
				▪ Information and strategic advice	0.5
IM – Service Delivery	34.5	0	(0%)	▪ No opportunities identified	
Water Accounts	13.9	0.03	(<1%)	▪ No opportunities identified	
SSR	12	1.91	(16%)	▪ No opportunities identified	
HSEQ	19	1.1	(5%)	▪ Training provision	0.5
				▪ HSEQ internal comms	0.5 – 1.0
	178.4	7	(3.9%)	**TOTAL FTE**	**6.15 – 7.15**

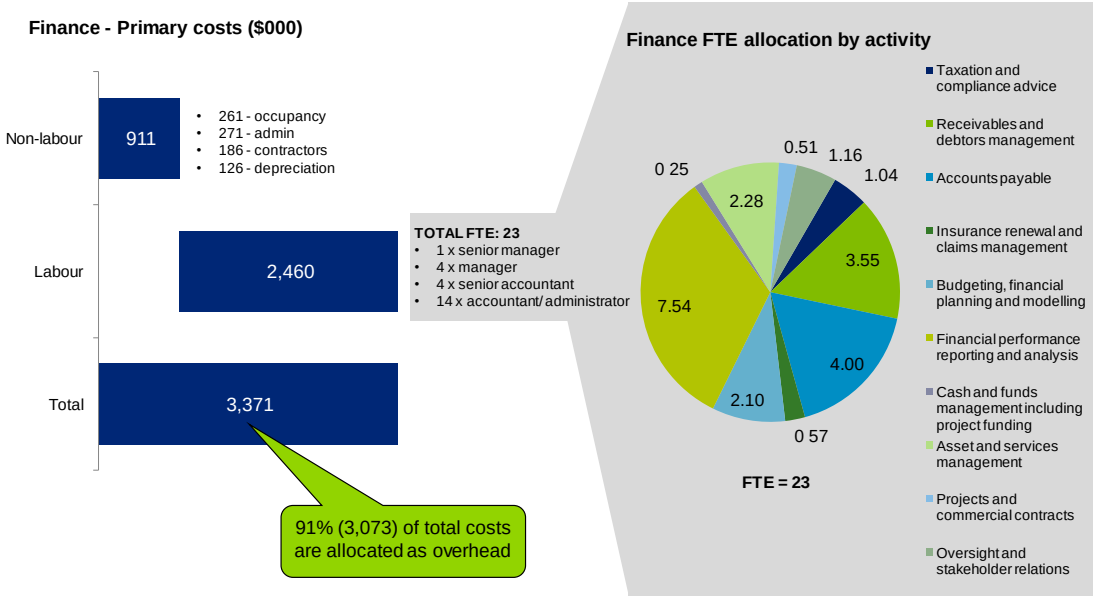
Each of the individual functions is addressed below.

Note: In the graphical presentation of the benchmark results, the comparable group for each sub function is displayed in quartiles, with an even number of utilities in each of the four quartiles. The top quartile represents the 25% utilities that have the lowest number of FTE's for that particular sub-function, with the fourth quartile representing the 25% of utilities that have the highest number of FTE's. The mid-point between the second and third quartile is the median.

Finance

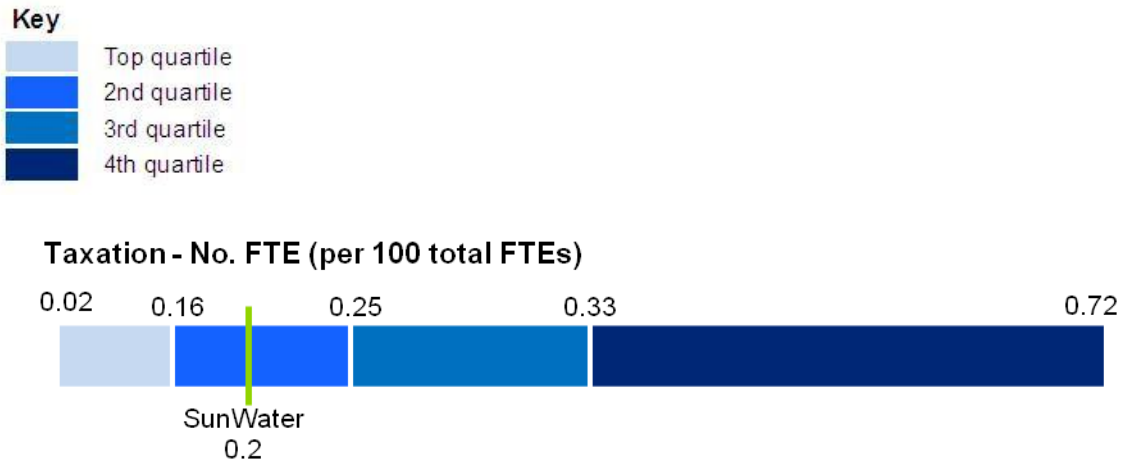
SunWater's finance function includes major activities of accounts payable and receivable, finance reporting and analysis and cash and funds management. The MAE analysis indicated that of the 23 FTEs in the finance function the majority of employee time was spent on financial performance reporting and analysis (equivalent to 7.5 FTEs). The majority of Finance's costs were labour related with only 27% being non-labour (mostly made up of occupancy and administration costs). Administration costs include audit fees, office consumables, freight and post and desktop service charges among other items. 91% of finance total costs are allocated as overhead costs.

Figure 3-7 Finance MAE

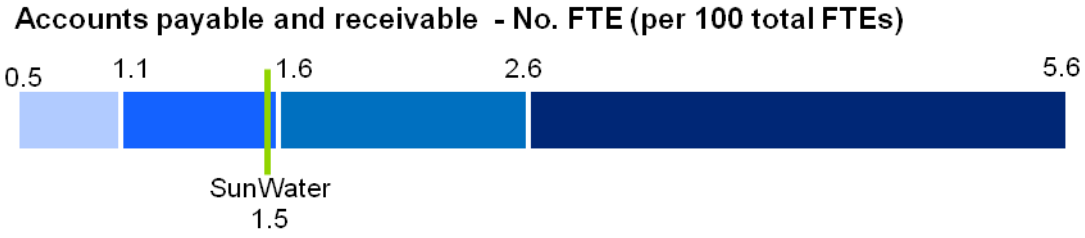


We benchmarked the finance sub functions of taxation, accounts payable and receivable, insurance claims and renewal, budgeting and finance planning, cash and funds management and financial analysis. Compared to the sample group five out of the six sub-functions were within the top two quartiles however financial analysis and reporting was in the fourth quartile.

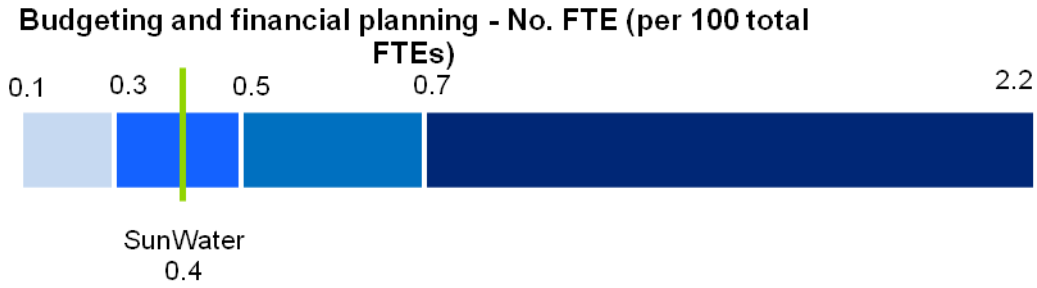
Figure 3-8 Finance Benchmarks



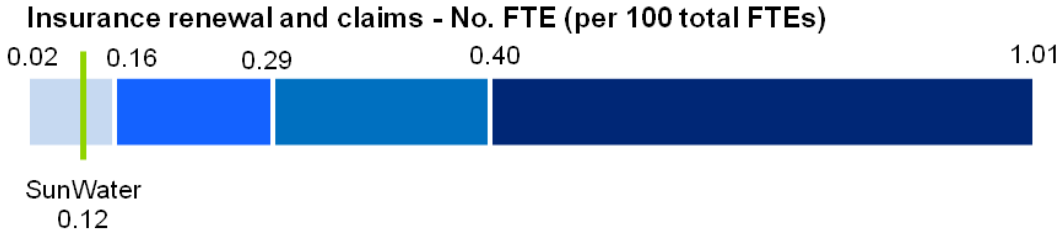
- Reasonable benchmark as FTE is a proxy for the size of the business which is a key driver for taxation effort



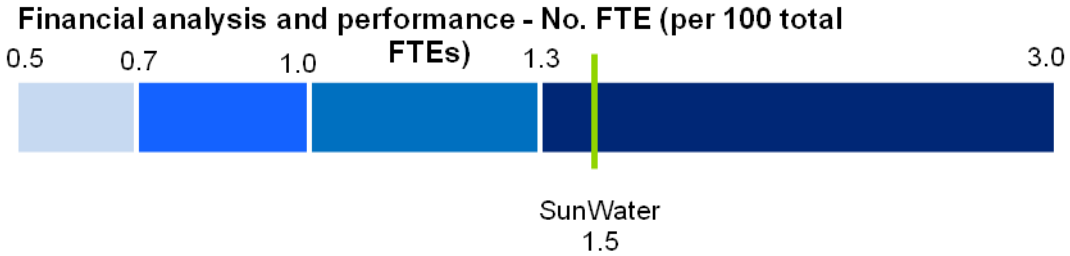
- Reasonable benchmark as FTE is a proxy for the size of the business which is a key driver of transactions



- Reasonable benchmark as FTE is a for proxy the size and complexity of the business which is the key driver for budgeting/planning.



- Weak benchmark as FTE is only a partial driver of insurance. Most insurance relates to asset value as this is the largest proportion of insurance



- Reasonable benchmark as FTE is a proxy for the size of the business which is the key driver for analysis and reporting

The MAE exercise and benchmarking indicate that there is opportunity to reduce finance costs by a potential of 2.35 FTE. Efficiency opportunities were identified in Accounts Payable, debt collection, customer payment methods, monthly and one-off reporting, and facilities and fuel card management.

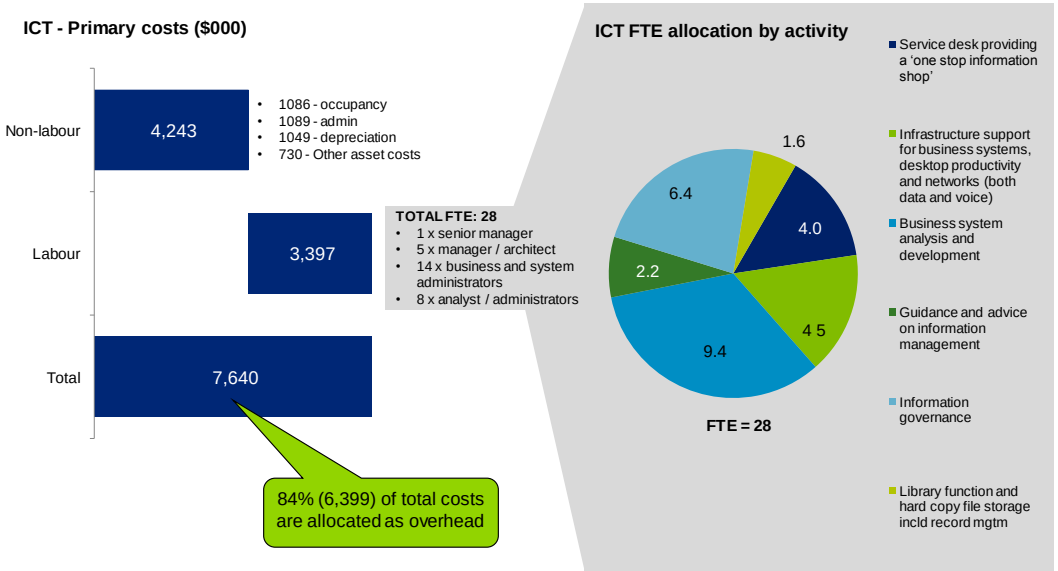
Table 3-7 Efficiency Opportunities – Finance

	FTE				
	Total (current)	Non-core		Efficiency opportunities	Potential FTE saving
Finance	23	1.2	(5%)	▪ Potential to review Accounts payable and debt collection for efficiency	0.5
				▪ Opportunity to transi ion customers away from manual payments (i.e. High proportion of cheques) to lower cost payment methods	0.25
				▪ Potential to review and improve monthly repor ing, one-off report requests and queries (approx 4.2 FTE's). This reporting is included in the financial analysis and performance benchmark where SunWater appeared in the fourth quartile	1.0
				▪ Potential to review facilities management for efficiency in terms of overlap with legal and property group	0.5
				▪ Potential to review fuel card management as FTE appears high	0.1
				TOTAL	**2.35**

ICT

SunWater's ICT function includes major activities of business systems analysis, infrastructure support, information governance and service desk. The MAE analysis indicated that of the 28 FTEs in the ICT function the majority of employee time was spent on business system analysis and development (equivalent to 9.4 FTEs). ICT's costs had a high non-labour component (55%) compared to other business functions. The non-labour component was made up of items such as wide area network charges, software maintenance and hardware, application licence costs, and occupancy (for Brisbane office and offsite file storage). 84% of ICT costs are allocated as overhead.

Figure 3-9 ICT primary costs and MAE



We benchmarked the ICT sub functions of service desk, infrastructure support and business systems analysis and development. Compared to the sample group SunWater's service desk

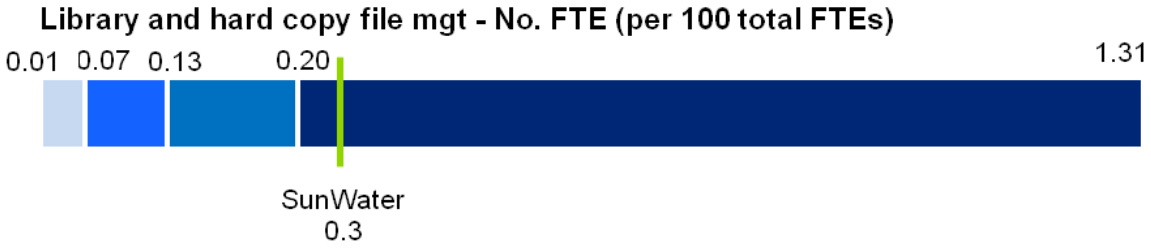
and business systems support (including SWIMs) were in the third quartile. Infrastructure support however was at the bottom of the top quartile.

Figure 3-9 ICT Benchmarks

- Strong benchmark as employees is a key driver of technical support that is required

- Reasonable benchmark as FTE is a proxy for the size and complexity of the business which is the driver for infrastructure support
- We note correspondance from SunWater that indicates that the above 2 metrics should be combined to accurately reflect the cross-skilling and shared roles between the activities. If this is the case then SunWater sit just within the second quartile (however further substantiation is required)

- Good benchmark as FTE is a proxy for the size and complexity of the business which is the key driver for number and size of business systems/modules
- The first business system benchmark (directly above) does not include the SWIMs business systems analysis which is undertaken by the Water Accounts function. The second benchmark includes SWIMs.



- Good benchmark as number of FTE's would drive demand for document management
- SunWater sit in the bottom quartile of benchmark sample. Potential to review for efficiency. We do note SunWater's commentary that hardcopy file management services are higher due to the age of a number of assets within the organisation, the design responsibilities of SunWater, the geographic dispersal of operating locations and the recent centralisation of record keeping services.

The MAE exercise and benchmarking indicate that there is potential opportunity to reduce ICT costs by 1.3 FTE. Efficiency opportunities were identified in the service desk, library and hard copy file management, and information discovery and strategic guidance.

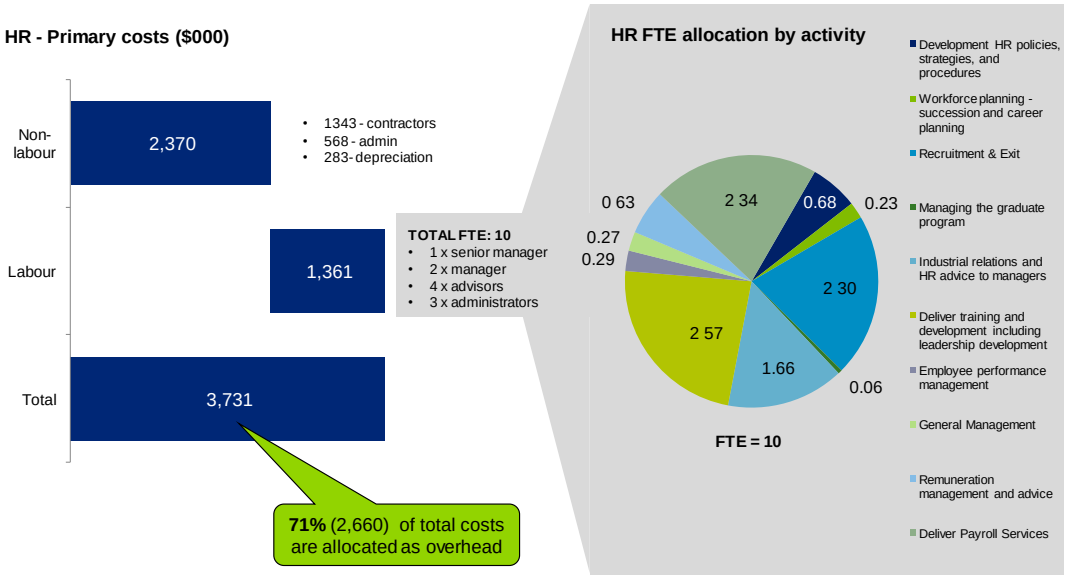
Table 3-8 Efficiency Opportunities – ICT

	FTE			
	Total (current)	Non-core	Efficiency opportunities	Potential FTE saving
ICT	28	0.7 (2.5%)	▪ Compared to benchmark Service Desk seems high – potential to review Technical support for efficiency	0.5
			▪ Compared to benchmark, library and hard-copy file management was in fourth quartile. Potential to review online library services with overlap wi h Hummingbird (document mgt system) for efficiency gains	0.3
			▪ ICT informa ion discovery services and strategic guidance are non-core ac ivities and could be reviewed for efficiency. Coupled with SSR, information services seems high. Operational support and training as has 1 FTE dedicated to it which seems high.	0.5
			TOTAL	**1.30**

HR

SunWater's HR function includes major activities of workforce planning, recruitment and exit, training and leadership development and payroll services. HR's costs had a high non-labour component (63% of total costs) compared to other business functions. The largest non-labour component was for contractors which was a similar amount to total labour costs. 71% of HR costs are allocated as overhead.

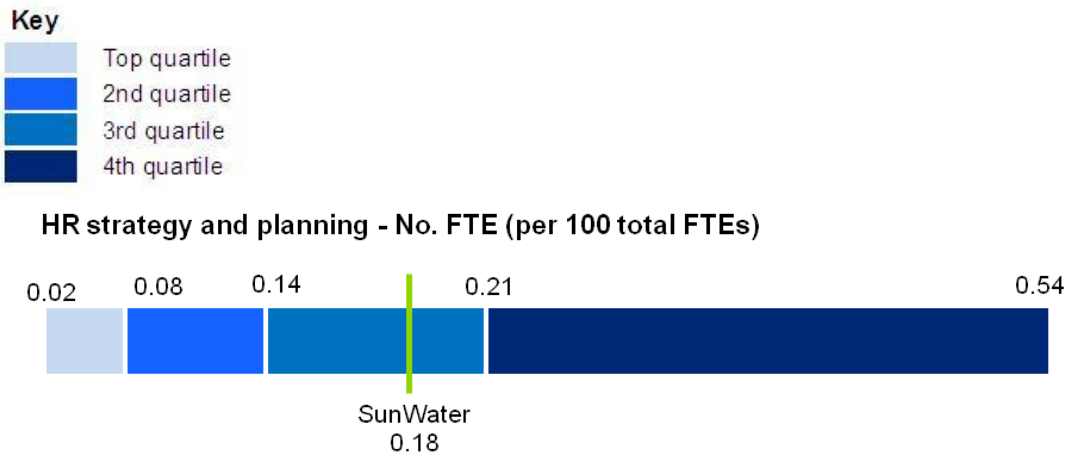
Figure 3-10 HR primary costs and MAE



We benchmarked the HR sub functions of strategy and planning, recruitment and exit, training and development, industrial relations, remuneration management and advice and payroll. Compared to the sample benchmark group three of the six sub-functions were in the fourth quartile and two were in the third quartile. SunWater's remuneration management advice was above all other benchmark utilities. These HR benchmarks are considered strong as FTE is the major driver of HR effort.

One potential reason for benchmarking results being in the third and fourth quartiles is that HR has largely fixed costs where labour may not necessarily increase commensurate with the size of the utility. SunWater is the smallest utility (in terms of FTE) of the benchmark sample meaning that other utilities will have a scale advantage. However, SunWater does have high contractor costs which are not factored into the benchmark.

Figure 3-11 HR Benchmarks

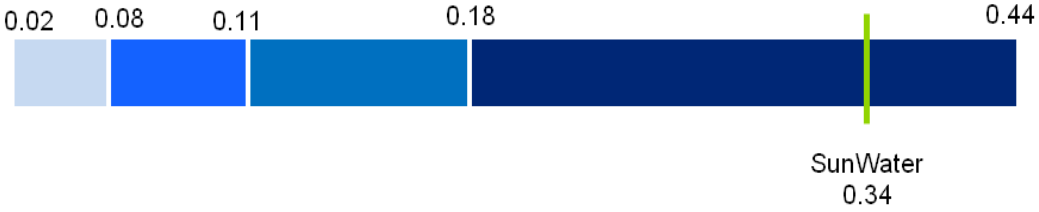


- Strong benchmark as HR strategy and planning is driven by number of FTEs

Recruitment and exit - No. FTE (per 100 total FTEs)

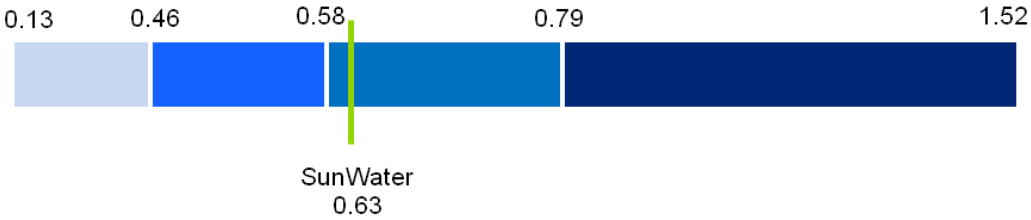
- Strong benchmark as recruitment and exit is driven by number of FTE's

Industrial relations - No. FTE (per 100 total FTEs)



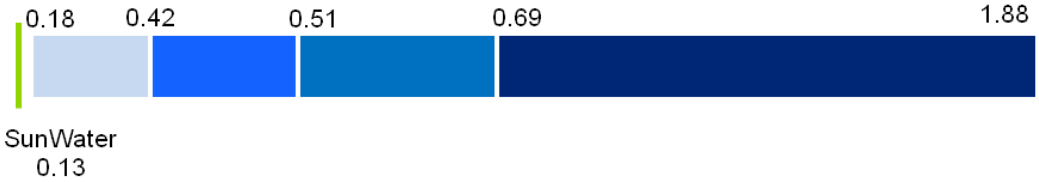
- Strong benchmark as industrial relations effort is driven by number of FTE's

Management, training and development - No. FTE (per 100 total FTEs)



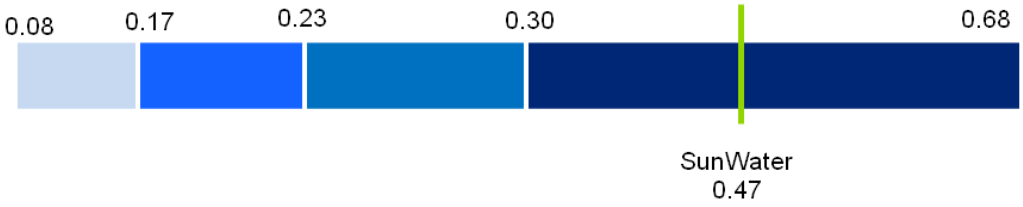
- Very strong benchmark as training and development is driven by number of FTE's

Remuneration mgt and advice - No. FTE (per 100 total FTEs)



- Strong benchmark as remuneration management and advice is driven by number of FTE's

Payroll - No. FTE (per 100 total FTEs)



- Strong benchmark as payroll is driven by number of FTE's

The MAE exercise and benchmarking indicate that there is opportunity to reduce HR costs by a potential of 1.50 – 2.00 FTE. Efficiency opportunities were identified in the recruitment and exit, industrial relations and payroll activities.

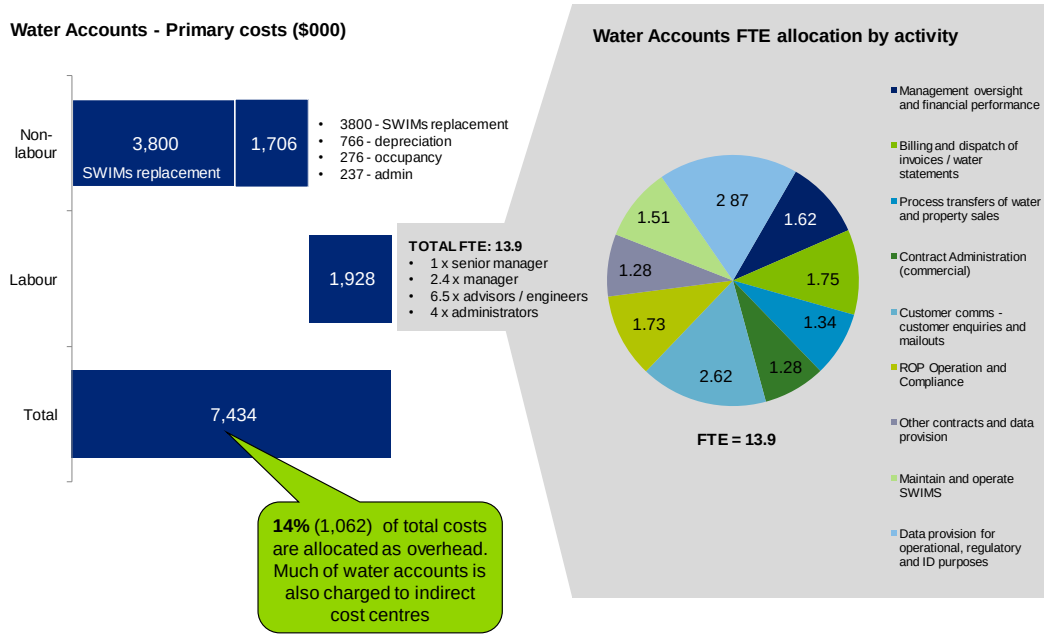
Table 3-9 Efficiency Opportunities – HR

	FTE			
	Total (current)	Non-core	Efficiency opportunities	Potential FTE saving
HR	10	1.8 (16%)	▪ Recruitment and exit landed in the fourth quartile of benchmark sample. There appears to be a number of potential efficiencies such as; reduce time spent reviewing and developing role descriptions; online induction and pre-employment; upda ing org charts; and HR admin	0.5 - 1.0
			▪ Industrial relations landed in the fourth quartile of benchmark sample. A few potential efficiencies exist including time spent on Enterprise Agreement and IR strategies, IR advice to Managers	0.5
			▪ Payroll landed in the fourth quartile of benchmark sample. Time shee ing process seems to be labour intensive as does facilitating he payroll process which is automated. Potential or efficiency.	0.5
			TOTAL	**1.50 – 2.00**

Water Accounts

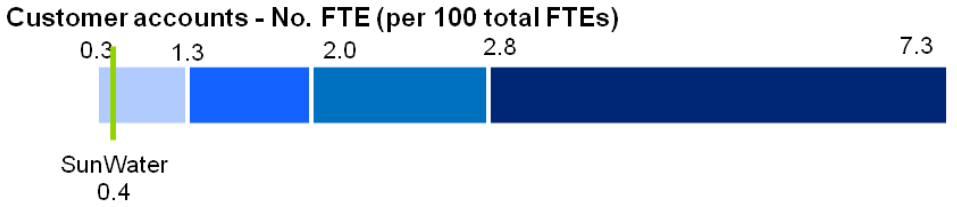
SunWater's Water Accounts function includes major activities of customer call centre/enquires, ROP compliance, customer accounts and data provision for a total of 13.9 FTEs. Water Accounts non-labour costs include the SWIMs replacement project ($3.8m in 2012). Other major non-labour components were for depreciation, occupancy and administration. 14% of Water Accounts costs are allocated as overhead. There are also a large proportion of costs that are allocated indirectly.

Figure 3-12 Water Accounts primary costs and MAE

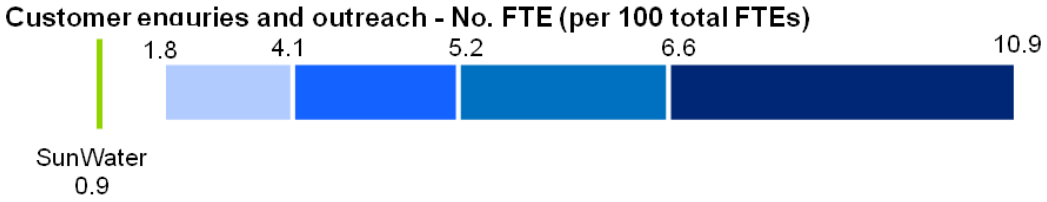


We benchmarked the Water Accounts sub functions of customer accounts, customer enquiries and outreach (or external comms) and management of customer service (Water Accounts) team. Compared to the sample benchmark group two of the three sub functions were in the top quartile and one was in the second quartile. The first two of these Water Accounts benchmarks however are considered weak as customers (rather than FTE) is the major driver of effort. As discussed earlier, customers were not able to be used as a benchmark as many of the benchmark utilities have a combination of both domestic and commercial customers. SunWater has predominantly commercial (or bulk) customers.

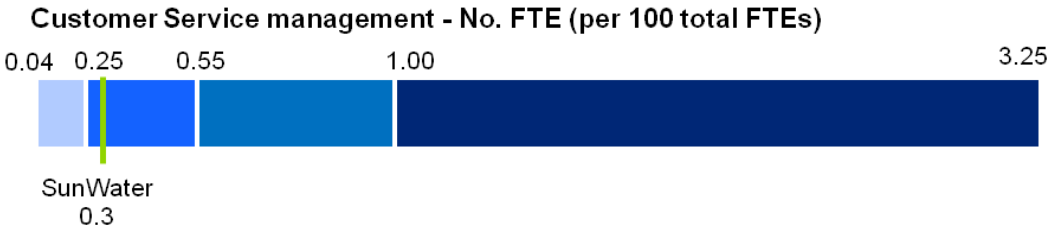
Figure 3-13 Water Accounts Benchmarks



- Weak benchmark as main driver of customer accounts is number of customers



- Weak benchmark as main driver of enquries and external communications is number of customers
- The external communications activities from SSR were included in this benchmark



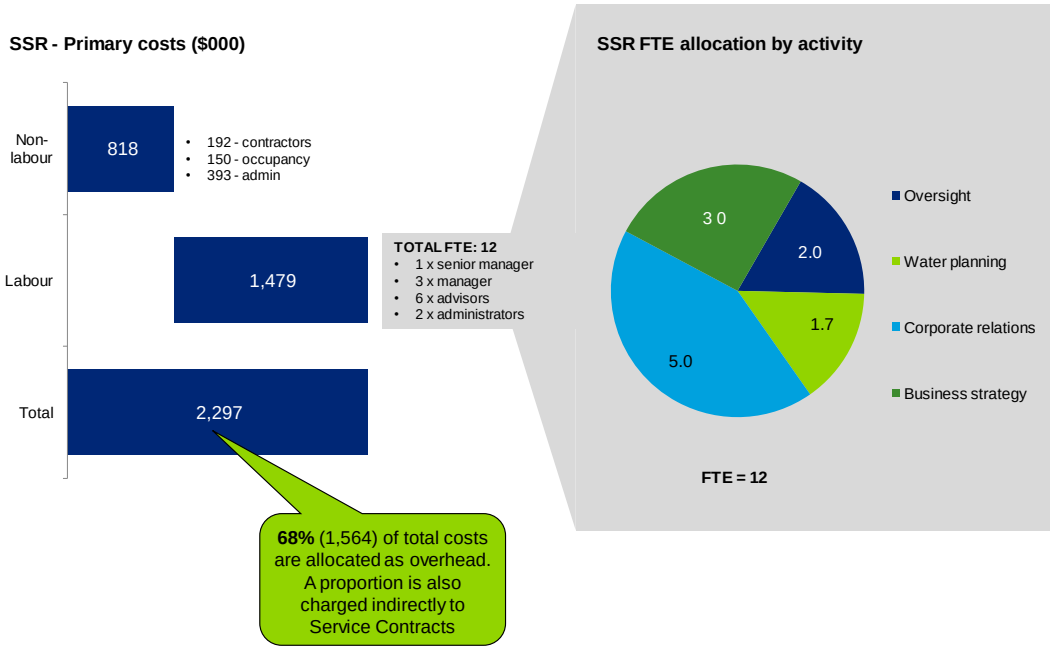
- Reasonable benchmark as management of the customer service team is driven by the number of FTEs within in the team

The MAE exercise and benchmarking indicate that there is little opportunity to reduce Water Accounts costs. It should be noted however that the SWIMs replacement is a major project that has been identfied by SunWater to drive further efficiency in this function. Currently 1.5 FTE is dedicated to maintaining and operating SWIMs, therefore we would expect to see efficiency improvements once the SWIMs replacement project is commissioned in three years. This may also drive improvements for other sub-functions of Water Accounts that rely heavily on SWIMs, such as ROP compliance and process transfers of water and property sales.

SSR

SunWater's Strategic and Stakeholder Relations (SSR) function includes major activities of water planning, corporate relations and business strategy for a total of 12 FTEs. The majority of SSR costs consist of labour with 36% in non labour costs. Major non-labour components were administration, contractors and occupancy. 68% of SSR costs are allocated as overhead. SSR also charges some time indirectly to Service Contracts.

Figure 3-14 SSR primary costs and MAE



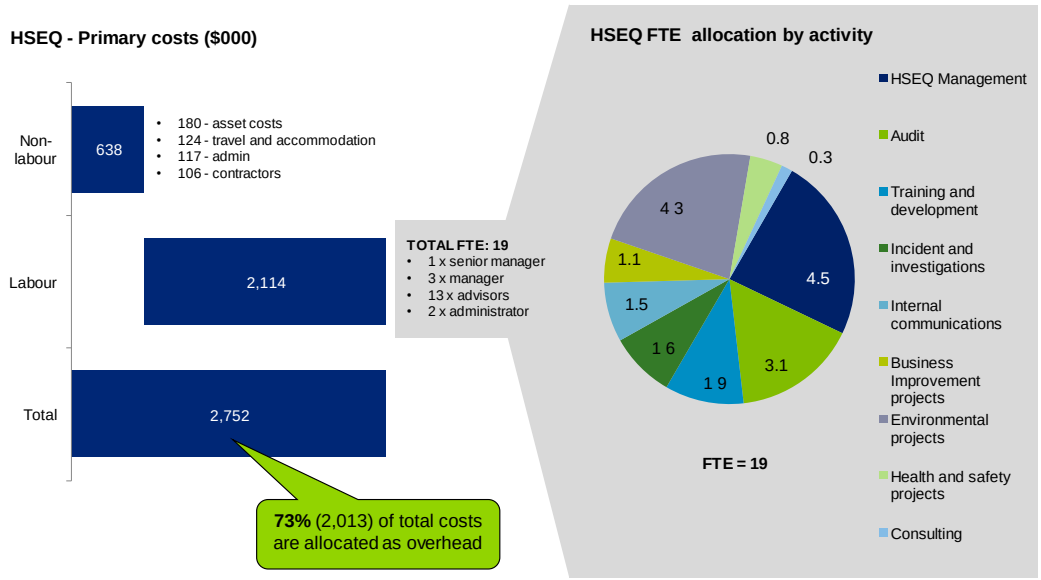
There were no benchmarks for SSR, although the external communications component of SSR (which includes strategic advertising and annual report etc.) was included in the customer enquiries and community outreach benchmark of Water Accounts.

Our assessment indicates that there were no clear efficiency opportunities.

HSEQ

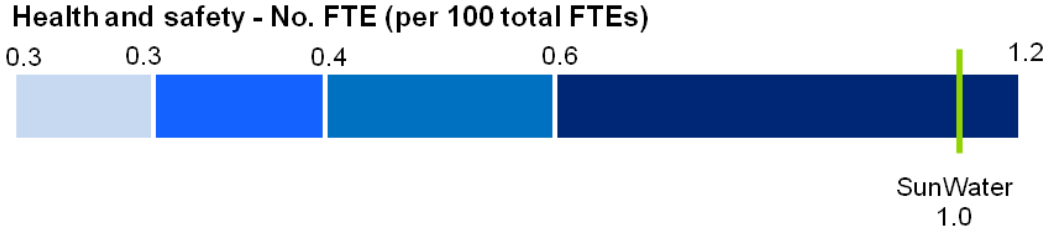
SunWater's Health and Safety, Environment and Quality (HSEQ) function includes major activities of HSEQ management, environmental projects, audit, training and development and incident reporting for a total of 19 FTEs. The majority of HSEQ costs consist of labour with 23% in non labour costs. Major non-labour components were asset costs, travel and accommodation and administration. 73% of HSEQ costs were allocated as overhead.

Figure 3-15 HR primary costs and MAE



We completed one benchmark for HSEQ being the health and safety area. This was considered a strong benchmark as health and safety effort is driven predominantly by number of FTEs in the business. The health and safety area of SunWater was in the fourth quartile of the benchmark group.

Figure 3-16 HSEQ Benchmarks



- Strong benchmark as health and safety effort is driven by number of FTE's

The MAE exercise and benchmarking indicate that there is some opportunity to reduce HSEQ costs by a potential 1 to 1.5 FTE. Efficiency opportunities identified included in training and development and in HSEQ internal communications.

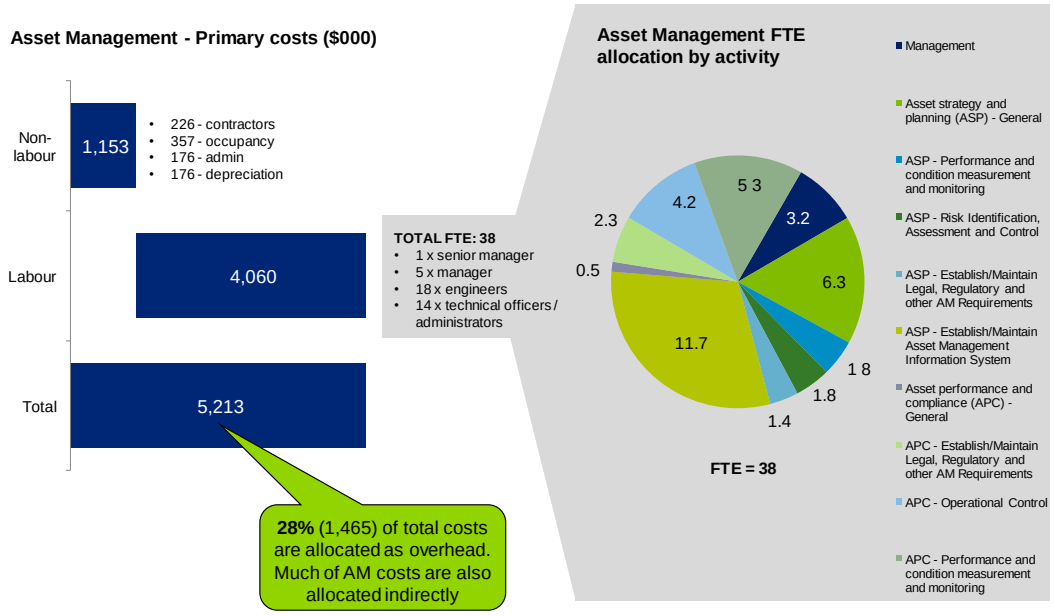
Table 3-10 Efficiency Opportunities – HSEQ

	FTE			
	Total (current)	Non-core	Efficiency opportunities	Potential FTE saving
HSEQ	19	1.1 (16%)	▪ HSEQ delivers over 300 training sessions per year to the business wi h 1.5 FTE dedicated to training. There is potential to review opportunities for consolidation of sessions.	0.5
			▪ Internal communications in HSEQ includes1.5 FTE. This appears high and there is poten ial to review for efficiency	0.5 – 1.0
			TOTAL	**1.00 – 1.50**

Asset Management

SunWater's Asset Management function includes major missions of asset strategy and planning and asset performance and compliance, which includes performance condition and monitoring, risk identification and control, maintaining regulatory and legal requirements for a total of 38 FTEs. The major activity is in establishing and maintaining the Asset Management Information System (AMIS) which takes up 11.7 FTE. The majority of Asset Management costs consist of labour with 22% in non labour costs. Major non-labour components were occupancy, contractors, administration and depreciation.

Figure 3-17 Asset Management primary costs and MAE

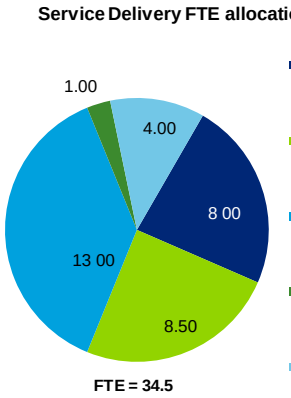


There were no comparable benchmarks for asset management. Overall there were limited efficiency opportunities identified. We will finalise this analysis through working with the Authority's technical advisors to ensure these resource requirements are aligned with the planning requirements of the business.

Service Delivery (Regions)

SunWater's IM Service Delivery function includes all the operations for the four key service regions. In terms of overhead resources there are 34.5 FTE's (consisting of managers, senior engineers schedulers and administration staff) dedicated to; managing the regional business, day to day operations, managing resource efficiency of field workers for efficiency and standards of service, and regional administration support. The major activity is in managing the regional business with area operation managers and depot service managers consisting of 13 FTE.

Figure 3-18 Service Delivery MAE



	Brisbane	Far North	North	Central	South	TOTAL
Service Delivery Manager	1					
Senior Engineers	4					
Area Operations Manager		1	1	1	1	4
Depot Service managers		2	3	2	2	9
Scheduler		1	2 (1 x project)	1	1	5
Administration scheduler		1	1	1		3
Senior administrator		1	1	1	1	4
Administrator		1	1	1	1	4
Cleaner			0.5			0.5
TOTAL	5	7	9.5	7	6	**34.5**

There were no comparable benchmarks for service delivery. There were limited efficiency opportunities identified. We note that a significant number of persons have been removed from the regions under the centralisation of activities. The persons remaining largely look after the office and scheduling activities. There is some limited admin roles required.

While there might be an opportunity to consolidate regions and offices to enjoy efficiency gains this is out of scope of this study. Careful attention must be given to the scale and geographic spread of SunWater's operations. Given the current depot structure we feel compared to other similar industries that the FTEs are appropriate.

3.5 Case Studies

To supplement the benchmarks and support the analysis with a number of locally comparable bulk water providers we completed a number of benchmark studies to understand the relative size of the administrative cost base. We note that we have in many cases relied on publically available information and that even when additional information has been available there is significant difficulty in comparing 'apples with apples' despite this we have collated a range of data for local water utilities and present the information in Table 3-10 below.

The range of benchmarks is significant. We will continue to refine these benchmarks for the final version of the report to ensure we are comparing like with like.

Table 3-10 Administration costs as a percentage of O&M

Utility	Admin costs (2008-09)	Total operating costs (2008-09)	Admin costs % of operating costs	Source
QLD				
SunWater (Entity)	$9,533,369	$43,091,078	22%	Rural NPR
SunWater (Bulk)	$3,907,342	$15,838,241	25%	Rural NPR
SunWater (Distribution)	$5,626,027	$27,252,837	21%	Rural NPR
Gladstone Area Water Board		$13,930,000		QCA - GAWB - Investigation of Pricing Practices
NSW				
Coleambally Irrigation Cooperative Limited (Entity/Distribution)	$3,168,018	$8,242,018	38%	Rural NPR
Murray Irrigation Limited (Entity)	$3,825,631	$10,252,820	37%	Rural NPR
Murray Irrigation Limited (Distribution)	$3,177,000	$8,861,000	36%	Rural NPR
Murrumbidgee Irrigation Limited (Entity/Distribution)	$5,772,000	$15,069,000	38%	Rural NPR
Sydney Catchment Authority		$87,000,000		2009-10 AR, IPART FD 2009-2012
State Water (Entity)	$2,394,000	$37,580,000	6%	Rural NPR
State Water (Bulk)	$2,367,000	$33,651,000	7%	Rural NPR
SA				
Central Irrigation Trust (Entity/Distribution)	$1,364,000	$5,072,000	27%	Rural NPR
VIC				
Goulburn-Murray Water (Entity)	$19,378,432	$76,427,786	25%	Rural NPR
Goulburn-Murray Water (Bulk)	$2,334,765	$22,808,609	10%	Rural NPR
Goulburn-Murray Water (Distribution)	$11,883,575	$43,219,413	27%	Rural NPR
Grampians Wimmera Mallee Water (Entity)	$2,499,649	$5,657,780	44%	Rural NPR
Grampians Wimmera Mallee Water (Distribution)	$2,236,488	$5,306,712	42%	Rural NPR
Lower Murray Water (Entity)	$4,815,475	$15,464,508	31%	Rural NPR
Lower Murray Water (Distribution)	$3,413,307	$12,820,363	27%	Rural NPR
Southern Rural Water (Entity)	$4,902,223	$23,857,411	21%	Rural NPR
Southern Rural Water (Bulk)	$796,539	$4,839,070	16%	Rural NPR
Southern Rural Water (Distribution)	$1,648,415	$10,362,367	16%	Rural NPR
WA				
Harvey Water (Entity/Distribution)	$1,271,543	$3,653,851	35%	Rural NPR
Ord Irrigation Co-operative (Entity/Distribution)	$639,556	$2,709,241	24%	Rural NPR

Note: Due to definitional differences between this Report and the Rural NPR, SunWater's administration cost figures identified in table 3-10 will be different to the costs identified in this Report.

We are also in the process of completing a case study in relation to the Pioneer Valley Water Board. This analysis will be complete for the final report.

3.6 Cost Escalation

We have completed a high-level review of cost escalation rates and these appear to be in line with our expectations. Further analysis will be included for the final report.

3.7 Insurance

Insurance costs have been addressed separately. SunWater has recently completed a review of its insurance policy and replaced the lead provider. The process undertaken indicates a competitive process has been followed to both identify a suitable insurance lead provider and an appropriate package of insurance coverage. Due to intellectual property issues we have not been privy to the detailed calculation of the insurance premium and cannot comment on the competitiveness or otherwise of the rates agreed (other than to note the process that SunWater and their broker have outlined would support a competitive outcome). Further commentary will be provided in the final report.

3.8 Identified Efficiency Opportunities

Overall SunWater's cost structure benchmarks are within expected global benchmark ranges with some minor exceptions. Our MAE analysis did not identify any major structural issues with the delivery of services (other than the relatively high ICT cost that is being addressed through the SWIMS replacement program). Our draft analysis indicates there is an opportunity to reduce FTEs by 3.4-4% however this will be refined through additional analysis prior to our final report. The main opportunities identified are within the Finance, HR, ICT and HSEQ functions.

4 Cost Allocation Methodology

4.1 Cost Allocation Principles

Material differences exist in the cost of water delivery to each of SunWater's WSS as a result of the diverse nature of each of SunWater's WSS in terms of size, location, asset characteristics, the capital and labour resources required to deliver water supply services and the services delivered to that WSS. For instance, a WSS that employs twice as many SunWater staff compared to the average scheme will generally incur higher-than-average labour costs. By the same token, WSS that are relatively capital-intensive will often incur high refurbishment and enhancement costs. As the prices set by the Authority should be cost reflective (subject to the guidance in the Amended Notice), it follows logically that those WSS responsible for the greatest proportion of costs should also be charged the highest prices.

An appropriate cost allocation methodology is required to ensure that costs are most appropriately allocated to the parts of the business which receive the service that generated these costs. In some cases there is a clear driver for allocating costs, whereas in other cases the relationship between cost generation and service provision is not clear and appropriate rules for allocating these costs must be devised. This section outlines SunWater's proposed allocation methodology and assesses potential alternative allocation methodologies based on best practice.

Given the importance of cost allocation in determining the prices developed for each WSS, it is important that the resulting methodology is robust and accurate. There are a number of holistic principles of cost allocation, which should be followed when developing a cost allocation methodology. The principles, which will be discussed further below, recommend an appropriate cost allocation methodology (CAM) should:

- directly attribute costs whenever practicable
- consider the inherent accuracy of each driver's data source
- treat similar types of costs consistently
- make appropriate trade-offs between simplicity and accuracy
- be aligned with other players in the industry.

4.2 Recent Determinations and Case Studies

In addition to the above pricing principles, recent determinations provide an indication of the latest thinking by regulators and businesses in appropriate allocation methodologies. While a

more detailed assessment of current thinking by regulators (AER, IPART, ACCC) will be included in the final report, Appendix A includes a number of relevant case studies of how other water and energy utilities address cost allocation. It is important to note that there is a wide variation in the selected drivers to allocate both indirect and overhead costs in the cases documented.

4.3 SunWater's Proposed Methodology

Broadly speaking, SunWater breaks its cost base down into three types of costs:

- direct costs
- indirect costs
- overhead costs.

Table 4-1 Cost Types

Direct Costs	Costs that can be directly attributed to a particular Water Supply Scheme (WSS) or segment. Whenever it is practicable for SunWater employees to "charge" their time or expenses to a particular WSS, they do via timesheeting process. The most common direct cost is direct labour, which is incurred when a staff member performs work that can be attributed to a particular Scheme (such as maintenance on a distribution pipeline)
Indirect Costs	Costs incurred by a SunWater function in providing support to a particular subset of Service Contracts, rather than to all 62. These subsets of Service Contracts are defined by the Line of Business they fall under, and by their Contract Type. For instance the Dam Safety function provides support to Bulk Water Supply Service Contracts of all Contract Types, as these are the only Service Contracts to have dams.
Overhead	Costs are those costs incurred by SunWater functions in providing support to the business's 62 Service Contracts, across all Lines of Business (Bulk, Distribution etc) and Contract Types (Full Service, O&M and Asset Management, O&M and Customer Service, and O&M). These costs are generally of a 'corporate overhead' nature and include functions such as Finance and ICT. Overhead costs can be further demarcated into: ○ Brisbane overheads, which are overhead costs incurred in supporting the entire business, such as the Board or CEO. ○ Local overheads, which are overhead costs incurred in supporting a discrete aspect of the business, such as Asset Management, or Infrastructure Management – Far North ○ Mixed overheads, which a combination of Brisbane and Local overheads. Examples include Finance, HR and Strategy. ○ 5% materials overhead, where any non-labour (excluding electricity) costs charged to Service Contracts are increased by 5% to cover centralised procurement costs. The summation of all these 5% increases is then subtracted from total overheads before they are allocated out, so as not to double count.

In the case of SunWater, its direct, indirect and overhead costs must be apportioned to the various WSS it operates in order to ascertain the total cost of providing water supply services to each WSS and therefore an appropriate price path. Once a WSS's total costs have been determined, an appropriate division of that cost between customer groups within a WSS must be made. The issues involved in apportioning direct, indirect and overhead costs to scheme level are addressed first.

The nature of direct costs means that they can be attributed to a particular service and are therefore automatically apportioned. By way of example, consider a situation where SunWater staff perform maintenance on a dam located in the Burdekin-Haughton Scheme. The costs associated with these employees, including labour and non-labour costs (i.e. materials, travel) are directly attributable to the provision of bulk water supply services to that Scheme. As a result, these costs are directly charged to that Scheme using a combination of timesheets and project logs.

The allocation of indirect and overhead costs, however, is more complex because the indirect and overhead costs incurred by SunWater in the delivery of water supply services are relevant to more than just one Scheme. In other words there is no direct relationship between the service provided and the costs associated with generating the service. For instance, SunWater's internal finance department, which is centrally located in Brisbane head office, provides the financial budgeting, forecasting, modelling and reporting functions necessary for the business and its Schemes to successfully operate. However the costs incurred by this function cannot be directly attributed to each WSS and therefore must be allocated across Schemes. This requires an appropriate Cost Allocation Methodology (CAM).

An appropriate CAM should result in a Scheme being allocated an amount of indirect and overhead costs that is in proportion to that Scheme's causality of those costs. As indirect and overhead costs need to be apportioned across a number of Schemes, without necessarily having a direct causal relationship with those Schemes, a cost driver must be relied on. A cost driver is considered a proxy for a causal relationship where none exists, or alternatively, a proxy for effort. For instance, it is unlikely that the number of pump stations in the Burdekin-Haughton distribution system have any bearing on the costs incurred, or effort exerted, in the Finance function. If the number of customers in this Scheme tripled, however, this would likely result in extra effort from Finance in order to successfully invoice accounts, process cheques and so on. As such, a potential driver of the Finance function's cost is the number of customers served by SunWater. If this driver was used and assuming no weightings were applied, a Scheme with 2000 customers would be allocated an amount of Finance costs ten times as large as the amount allocated to a Scheme with 200 customers. This example highlights the importance of allocating indirect and overhead costs using a methodology that, where a causal relationship cannot be established for a cost item, relies upon a robust, appropriate cost driver.

Once the total cost associated with a Scheme has been determined (which will be a composite of direct, indirect and overhead costs), it must be allocated to the customer groups within that Scheme using an additional CAM. This CAM should have a similar objective as the one outlined above; a customer group should be allocated an amount of cost that is in proportion to that customer group's causality of that cost. SunWater's methodology for this apportionment of Scheme total costs will be outlined in the sections below.

Resource Centres

Resource Centres form the starting point for the allocation of all administration costs, both overhead and indirect.

A Resource Centre is essentially a business unit within SunWater that is responsible for employing staff (as well as incurring non-labour costs). This is distinct from a Service Contract, which is not an employer of people and does not incur costs itself (but rather has costs directly charged or allocated to it). At the start of a budgeting period, a Resource Centre

captures the combined salaries of all staff it employs. For instance, the ICT function, which is a centralised function within the Brisbane head office, is the Resource Centre that employs the staff in SunWater's ICT department. As ICT staff carry out work, they "charge" their time and expenses to the part of the business they are performing tasks for (known as the recipient of the service). Recipients can either be other Resource Centres (i.e. if ICT performs work for the Finance function), or Service Contracts (i.e. if ICT performs work for Burdekin-Haughton Water Supply). As time is charged to recipients, the labour and non-labour costs (i.e. materials) residing in the Resource Centre are depleted. The residual of these costs (i.e. costs that do not get charged to other Service Contracts or Resource Centres) which is left residing in the Resource Centre, must then be allocated out to Service Contracts and Indirect Resource Centres using an appropriate allocation methodology.

4.3.1 Allocation methodology

There are four different categories of Resource Centre – Brisbane overhead, local overhead, Mixed overhead and Indirect. The allocation of costs from these Resource Centres to the business is detailed below.

Local overhead Resource Centres (i.e. Asset Management)
As the name suggests, these Resource Centres are overheads, whose costs need to be apportioned out across the entire SunWater business. This is achieved by aggregating the "residual" costs of all local overhead Resource Centres and dividing by the forecast direct labour costs of the business to determine a "loading rate". For instance, if SunWater's local overhead costs and forecast direct labour costs summed to $10m and $40m, respectively, the loading rate would be 25% (=$10/40m). Every dollar of labour charged to either a Service Contract or an Indirect Resource Centre would have the loading rate applied to it, in order to allocate local overhead costs across the business (note that labour charged to an overhead Resource Centre does not attract overhead, so as not to add overhead to overhead).

Following on from the above example, if the Burdekin-Haughton Bulk Water Supply SC was forecast to have $1m of direct labour costs for a given year, its allocation of local overhead costs would be equal to $250,000 (25% of $1m).

Brisbane overhead Resource Centres (i.e. Corporate GM)
Brisbane overhead costs are allocated in a similar way to local overhead costs; the summation of the "residual" costs of all Brisbane overhead Resource Centres is divided by the forecast labour costs of the business to determine a "loading rate", which is then applied to every dollar of labour charged to either a Service Contract or an Indirect Resource Centre.

Note for the purpose of allocating costs to the business both the local and Brisbane overheads are treated identically and should be considered as one cost category. The difference between the two is the way in which these costs are treated within SunWater's accounting system to try and encourage SunWater employees to effectively manage their cost bases. The denominator in both the local and Brisbane loading rates is the same.

Local and Brisbane overhead (Mixed) Resource Centres (i.e. Finance)
Mixed overhead costs are apportioned in a similar fashion to Local and Brisbane overhead costs, with one additional step: the "residual" cost of a Resource Centre is first divided into a local overhead component and a Brisbane overhead component. These two components then "feed into" the calculation of the Local and Brisbane overhead rates, as described above.

Indirect Resource Centres (i.e. Dam Safety)
Indirect costs are essentially a more "targeted" variant of an overhead cost and are allocated using a similarly calculated "loading rate". This rate is determined by dividing the cost of an Indirect Resource Centre by the forecast labour costs of only those SCs that the Resource Centre provides support to. The rate is then applied to every dollar of direct labour charged to these Service Contracts.

The worked examples in Appendix B demonstrate the allocation of overhead and indirect costs to generate the rates at which costs are to be allocated to Service Contracts based on direct labour charged. Note that all numbers are forecast data for 2012 and in nominal dollars ('000s) unless otherwise stated. Each example is designed to be worked through in conjunction with the accompanying notes immediately after each diagram.

Appendix C provides worked examples that demonstrate the allocation of the above costs (using the calculated loading rates) to single Service Contracts (e.g., Burdekin-Haughton Water Supply, or ABB). The starting point for the first example is ABB's direct labour cost, as this is the cost driver SunWater proposes to use as the basis for allocating its indirect and overhead costs. The second example describes the allocation of total costs (comprised of labour and non-labour direct costs as well as indirect and overhead costs) to customer groups.

4.3.2 Basis for SunWater's allocation methodology

SunWater submits that the cost driver used in the previous price setting process, direct operating costs (excluding electricity), is no longer relevant. SunWater's customer base has evolved significantly since the last review, to include an increasing proportion of industrial and commercial customers. Given the lumpy nature of the expenditure required to service these customers and carry out other major capital projects, SunWater considers costed labour to be a more suitable basis of allocation. Given its effect on the quantum of centralised costs, SunWater's recent move to a more centralised business structure as a result of the Stronger Lighter Faster Initiative serves has increased the import of selecting an accurate, robust cost driver.

SunWater's considers labour costs to be an appropriate cost driver on the basis of it being a robust indicator of activity and effort, as well as a recent regulatory decision made by IPART in its assessment of State Water's cost allocation methodology. SunWater believes that "allocating indirect and overhead costs on the basis of labour ensures that a number of non-regulated activities, including consulting and external contracts (e.g. operations, facilities management) receive a reasonable proportion of costs, as these activities predominantly involve labour costs"[7]. Furthermore, SunWater considers that using an output measure such as customer demand as a cost driver would be unsuitable as there many centralised costs that are fixed in respect to output (i.e. it is unlikely ICT costs would vary with a marginal increase in customer numbers).

Lastly, SunWater recognises that using multiple drivers to allocate different cost types may result in a more unbiased allocation of costs. However, it contends that such a method can

[7] SunWater 2010, Background paper – QCA review of irrigation prices – Centralised costs, p. 10

result in increased scope for error, as well as being inherently complex and potentially difficult to implement. SunWater concludes that:[8]

"Labour is also reflective of a broad suite of centralised services, thus avoiding potential distortions that would arise from other measures. Labour is also a meaningful driver across SunWater's entire business, including for other assets and services."

4.4 Assessment of SunWater's Proposed Methodology

The appropriateness of any given CAM can be gauged against a number of allocation principles as previous discussed. These principles should reflect industry best practice, be logical and intuitive and importantly take into consideration the objectives of both regulators and regulated businesses. The principles along with a brief evaluation of SunWater's adherence to them, is discussed below.

Table 4-2 Principles of cost allocation

Guiding Principle	
Directly attribute costs whenever practicable	Where there is a clear causal relationship between a centralised function and a particular asset or activity, SunWater allocates costs based on an estimate of the effort (i.e. labour and non-labour costs) required to carry out the necessary work. Furthermore, utilisation targets incentivise employees to directly charge their time and materials to a particular activity.
Consider the inherent accuracy of each driver's data source	Data sources that are inherently inaccurate, such as management estimates, should be relied upon as infrequently as possible. We note SunWater forecasts direct labour costs on its estimate of employee utilisation. In addition the actual apportionment of indirect and overhead costs depends on actual labour costs, the integrity of which can be affected by inaccurate entry into timesheets. The allocation of costs between customer groups depends on AML (for operating and maintenance costs) and HUF (for capital costs). AML information is recorded by Water accounts and published in NSPs, while HUFs are determined using detailed hydrographic models, which are not in the public domain and thus cannot be tested for accuracy.
Treat similar types of costs consistently	A consistent allocation method should be applied across a particular type of costs (i.e. fixed costs should be allocated through indirect drivers, while costs which vary with customer demand should be allocated using direct drivers). SunWater's administration costs are predominantly fixed costs and have been consistently allocated using an indirect driver, namely forecast direct labour costs. However, some functions whose costs vary with customer demand, such as Customer Service within Water Accounts, have not been allocated using a direct driver. See below for further discussion of appropriate cost drivers for key overhead functions. The two categories of costs to be allocated to customers are operating and maintenance costs and capital costs. Capital costs have been consistently allocated to customer groups on the basis of HUFs, while O&M costs have been consistently allocated on the basis of AML. However, both categories of costs include a proportion of administration costs, resulting in the same type of cost (administration costs) being treated differently.
Make appropriate trade-offs between simplicity and accuracy	Achieving a perfect allocation across multiple services/products risks the methodology becoming too complex, and consequently, not understood by regulators, customers, employees and other stakeholders. Forecast direct labour is a simple cost driver that is easily measurable across all of SunWater's schemes. However, labour costs do not have a causal relationship or strong correlation with a number of

[8] SunWater 2010, QCA review of irrigation prices – Supplementary information – Allocation of centralised costs, p. 11

	centralised overhead and indirect functions. See below for further discussion of appropriate cost drivers for key overhead functions. The method of allocation to customer groups is both accurate and simple so long as the following assumptions are correct: • Operating costs do not vary between delivering HP and MP WAE and therefore AML is a suitable method of allocation • Capital costs do vary between delivering HP and MP WAE and therefore HUF is a suitable method of allocation as it takes into account this variance
Be aligned with other players in the industry	An assessment of industry peers is a useful input when assessing the reasonableness of a CAM. Benchmarking has inherent flaws as it is often the case that "apples are not being compared with apples" due to differences in size, structure and location between a business and its comparators. As our case studies reveal, there is no discernible trend in CAM across comparable utilities. See the below table for a summary of cost drivers used by other utilities to allocate their admin and overhead costs. Further qualitative assessment of SunWater's proposed CAM can be performed by considering the methodologies used by other Australian utilities in the form of case studies, and by conducting a high-level analysis of the appropriateness of a range of cost drivers. The case studies, which are included in Appendix A, highlight best practice in the context of the Australian water and electricity distribution industries. It is important to note that that regardless of which industry a utility operates in, the issue of allocating costs on a causal basis needs to be overcome with a robust CAM.

4.4.1 Assessment of Allocation Drivers by SunWater Function

The following section represents our preliminary view on appropriate cost driver/s for a number of key overhead functions. The cost drivers examined are used by the following companies to allocate overhead costs: Gladstone Area Water Board (GAWB), State Water Corporation (SWC), Goulburn-Murray Water (GM-W), SP AusNet, Jemena Energy Networks (JEN) and Ergon Energy. The appropriateness of a driver can be measured by the effect a marginal change in the driver (assuming the business has achieved economies of scale) has on the effort and cost of the function; an ideal cost driver for a particular function will have a causal relationship with the function's costs, or failing that, the chosen driver should have a strong, positive correlation with the ideal cost driver. For clarity when assessing the appropriateness of a driver we have addressed primary and secondary effects. For example, if labour costs were identified as an ideal cost driver but could not be implemented for a particular reason, number of FTEs would be a suitable secondary driver given the strong, positive correlation it has with labour costs.

Human Resources (HR)

The HR function's primarily purpose is to provide support to an organisation's employees in the form of recruitment, training and other guidance. As a result, the most suitable cost driver is headcount. That is, an additional employee hired to perform duties in a Service Contract results in greater effort required from HR in order to fulfil its purpose outlined above. FTEs and direct labour costs are considered to be proxies for headcount given the strong correlation between these variables. However, headcount is superior to FTEs due to the fact part-time employees are likely to require the same level of HR support as do full-time employees. An example of a weak cost driver for HR costs is asset value; there is little anecdotal evidence suggesting that a change in the value of the assets located within a Service Contract's would affect centralised HR effort and costs.

Finance
The Finance function's major activities include processing transactions (i.e. invoices, accounts receivable and accounts payable) , providing management with monthly financial reports and carry out budgeting, modelling and forecasting using the SunWater Financial Model. As a result, the most suitable cost driver is a transaction-based metric. That is, the more transactions coming out of a Service Contract, the greater time and effort exerted by Finance in processing that Finance is required to process these transactions. The number of customers located in a Service Contract is likely to have a strong, positive correlation with that Service Contract's transactions, making the former a suitable proxy for the latter. We consider direct costed labour to be a weak cost driver for Finance costs; an increase in a Service Contract's labour costs does not necessarily result in increased effort required from Finance.

SSR
The SSR function's responsibilities include facilitating effective external and internal communication (i.e. website and intranet), engaging with external stakeholders (i.e. ministerial enquiry) and a range of compliance-related duties involving ROPs and ROLs. As a result, the most suitable cost driver is number of Service Contracts. An increase in the number of Service Contracts results in greater effort required from Strategy in order to fulfil its compliance obligations in comparison to a WSS with one Service Contract. The effort required to effectively liaise with external stakeholders would likely increase if a Service Contract's customer numbers rose, making this a suitable alternative to number of Service Contracts. Weak drivers of Strategy costs include FTEs, asset value and direct labour costs.

HSEQ
HSEQ's primary role is to ensure employee awareness of and compliance with health and safety and quality guidelines. This function is also responsible for SunWater's compliance with regulations concerning the environment, such as the protection and enhancement of flora and fauna in its WSS. As a result, the most suitable cost drivers are those that capture employee numbers, such as FTEs or direct labour costs. Given that an additional Service Contract is likely to involve any number of environment-related compliance obligations, the number of Service Contracts is also an appropriate driver of HSEQ costs. Such obligations could include the construction of infrastructure that facilitates the migration of native fish and other species.

Legal/property
Legal and property's responsibilities are to manage all contracts and many of the commercial and regulatory obligations of the business. As such, suitable drivers are those that act as proxies for the volume of contract work in a particular WSS. Number of customers is potentially a suitable proxy as many of SunWater's customers use its land (i.e. to move livestock across) and thus require licensing. Asset value represents an alternative proxy; the greater the value of a WSS's assets (including land), the more likely this WSS will require effort from Legal and Property in the form of renewing and issuing contracts and licenses, negotiation with lawyers.

Procurement
Procurement's primary purpose is to facilitate the most efficient purchasing arrangements with suppliers and vendors for materials. As such, a transaction-based driver is suitable to allocate Procurement costs, such as the number of invoices received from suppliers or the

number of suppliers. Potential alternatives include asset value due to expensive assets generally involving more materials purchases for ongoing operations and maintenance tasks, and total direct costs, which acts as a proxy for the scale of work being performed in a WSS and therefore procurement needs.

ICT

The ICT function's responsibilities include the provision of internal technical support to employees. The effort and cost required to deliver this support is largely dependent on the number of employees; it is likely that a Service Contract with twice the employees of another will generate more IT support queries in comparison. On this basis, FTEs is a suitable driver of ICT effort, along with direct costed labour to the extent that it proxies for FTEs. ICT effort for a particular WSS will also be driven by the number of ICT devices located in that WSS, making this a potential alternative driver. ICT is also responsible for maintaining three key systems that support SunWater's operations: SWIMs, SAP and Hummingbird. The effort required to maintain and develop these systems is largely fixed and driven by the needs of the business. However, this is difficult to identity a proxy for.

IM GM/SD

Infrastructure Management's General Manager and the Manager of the Service Delivery function are responsible for broad oversight of their respective divisions, including tasks such as long term planning and strategy, providing leadership to management teams and ensuring financial targets are met. Given the broad nature of these tasks, it is difficult to determine the most suitable driver of effort and cost. However, the attention of senior managers is generally focused on whichever areas have the largest financial impact on the business, making total direct costs a suitable driver. That is, the greater the total direct costs incurred by a WSS, the more likely it is that the general oversight of these managers will be directed towards that particular WSS.

IM Regions

Each regional office is managed by an Area Operations Manager, who is responsible for providing management of the jurisdiction's staff and ensuring customer service standards met. Given that employees in these regions predominantly charge their time and expenses directly to Service Contracts, the remaining costs to be allocated via a driver are costs that cannot be directly charged. It stands that these costs should ideally "follow" direct labour costs, making it the most appropriate driver. The logic behind this is that those WSS incurring the greatest direct labour costs will also be responsible for the greatest proportion of unutilised labour costs (assuming utilisation forecasts are accurate), which then need to be allocated out using an appropriate driver. Using this driver ensures that unutilised labour costs are most accurately apportioned out to the WSS they derive from.

IM Asset Management

Asset Management's primary function is to provide schedules of work for SunWater's broad suite of capital assets, which are then reviewed by schedulers in the regions and then carried out by the appropriate staff. Direct total cost is therefore the most appropriate driver of Asset Management cost and effort, as this driver captures the capital component of expenditure along with other operating maintenance costs. That is, those WSS with the greatest amount of total direct costs need more work plans to manage and construct their capital projects, with Asset Management holding responsibility for the creation of these plans.

IM Water Accounts

Water Accounts' three areas of responsibility are the provision of customer support in WAE matters, water accounting and hydrographic services. The second two areas are predominantly driven by business needs and not necessarily driven by a metric that can be ascertained for each WSS. As such, an appropriate cost driver for Water Accounts costs is one that captures the demand for its services. The number of customers is therefore a suitable driver, in that those WSS with the most customers will likely generate the most WAE-related, enquiries, which are subsequently resolved by Water Accounts. This function is also responsible for processing water trades, making a transactional-based metric, such as the volume of water trades generated by a WSS, a potential alternate driver.

Infrastructure Development

The ID function's main purpose is to design capital works projects, such as the Cotters Dam Enlargement Project. As such, the most appropriate driver is total direct costs as it captures capital expenditure. This means that for any particular WSS, the greater the capital spend, the more effort is required by ID in providing ongoing technical advice and project management. A potential alternative to total direct costs is asset value, as those WSS with more valuable assets are likely to leverage the most off ID's engineering expertise. An example of a weak driver is number of customers. This is because there is little anecdotal evidence suggesting that more customers in a given WSS do not necessarily create the need for more engineering and technical advice.

The Figure 4-1 below summarises the relative strength and weakness of each of a range of drivers by function. Also listed are the relevant allocations used by comparable businesses.

Figure 4-1 Allocation Driver Summary

4.4.2 Summary of Recommendations

At the time of this draft report some analysis remains to be completed to enable firm recommendations on a proposed allocation methodology to be made. While we have identified that SunWater's selected cost driver 'direct costed labour' is appropriate for the allocation of some administrative cost functions, it is not always an appropriate choice when assessing individual functions. That said our analysis to date is preliminary only and results are largely for discussion purposes. A recommendation of the proposed allocation methodology will be included in the final report.

5 Conclusion

5.1 General Comments

This report presents draft findings with respect to the review of SunWater's forecast administrative costs. Due to the tight timeframes some analysis is still to be completed to make final conclusions however the assessment included provides an indication of the final report recommendations.

We have worked closely with SunWater to undertake our analysis and have at all times been provided with very good access to SunWater personnel, contractors and data.

5.2 Reasonableness and Prudency of Administrative Costs

Overall SunWater's cost structure benchmarks within expected global benchmark ranges. Our MAE analysis did not identify any major structural issues with the delivery of services (other than the relatively high ICT cost that is being addressed through the SWIMS replacement program). Our draft analysis indicates there is an opportunity to reduce FTEs by 3.4-4% however this will be refined through additional analysis prior to our final report. The main opportunities identified are within the Finance, HR, ICT and HSEQ functions, shown in Table 5-1 below.

Table 5-1 Efficiency Opportunities

	FTE			
	Total (current)	Non-core	Efficiency opportunities	Potential FTE saving
Finance	23	1.2 (5%)	▪ Accounts payable	0.5
			▪ Manual payment methods	0.25
			▪ Reporting	1.0
			▪ Facili ies management	0.5
			▪ Fuel card management	0.1
HR	10	1 8 (18%)	▪ Recruitment and exit	0.5 – 1.0
			▪ Industrial Relations	0.5
			▪ Payroll	0.5
Asset Management	38	0.27 (<1%)	▪ No opportunities identified	
ICT	28	0.7 (2 5%)	▪ Service Desk	0.5
			▪ Library and hard file management	0.3
			▪ Information and strategic advice	0.5
IM – Service Delivery	34.5	0 (0%)	▪ No opportunities identified	

Water Accounts	13.9	0.03	(<1%)	▪ No opportunities identified	
SSR	12	1.91	(16%)	▪ No opportunities identified	
HSEQ	19	1.1	(5%)	▪ Training provision	0.5
				▪ HSEQ internal comms	0.5 – 1.0
	178.4	7	(3.9%)	**TOTAL FTE**	**6.15 – 7.15**

5.3 Appropriateness of Cost Allocation Methodology

At the time of this draft report some analysis remains to be completed to enable firm recommendations on a proposed allocation methodology to be made. While we have identified that SunWater's selected cost driver 'direct costed labour' is appropriate for the allocation of some administrative cost functions, it is not always an appropriate choice when assessing individual functions. That said our analysis to date is preliminary only and results are largely for discussion purposes. A recommendation of the proposed allocation methodology will be included in the final report –section 4 provides our initial analysis and findings to date.

Appendix A – Case Studies

Goulburn-Murray Water

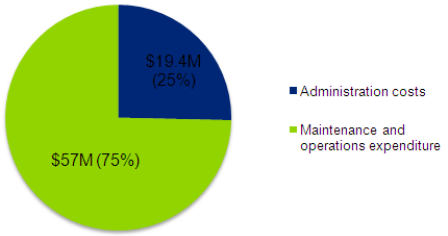
Key facts:[1]

Number of customers: 38,711[2]
Geographic area: 68,000 square km
Services provided include:
- Irriga ion (gravity fed and pumped systems)
- Surface water diversion
- Domes ic and stock supply
- Bulk water supply to water corporations
- Flood protec ion
- Commercial (recrea ional leases, houseboat licences etc).

Cost allocation methodology (CAM):[3]
- Allocates operating costs directly where possible (i e. technical services costs are allocated directly to areas)
- Costs not able to be direc ly allocated are allocated using key cost drivers. These overhead costs and their basis for allocation include:
  - HR – budgeted labour expenditure $
  - Finance – budgeted recurrent and capital expenditure $
  - Production – Water Enti lement/license volume/bulk supply volume for relevant retail services
  - Asset Planning - budgeted maintenance and capital expenditure $
  - SSA - budgeted recurrent and capital expenditure $.
- Where a key cost driver cannot be iden ified, combined operating expenditure and capital expenditure is used.

Geography:[4]

Administration costs as a percentage of total operating costs:[5]



(1) Source: Goulburn-Murray Water 2010, Annual Report 2009-10, p. 1
(2) Figure includes 1,521 commercial operators including houseboat license holders, hydroelectric companies etc
(3) Source: Frontier Economics 2005, G-MW - Review of pricing policies and models, March 2005, p. 175
(4) Source: http://www.g-mwater.com.au/about/regionalmap
(5) Source: National Water Commission 2010, National Performance Report 2008-09 – Rural water service suppliers, p.81

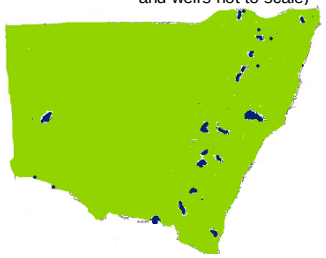
State Water Corporation

Key facts:[1]

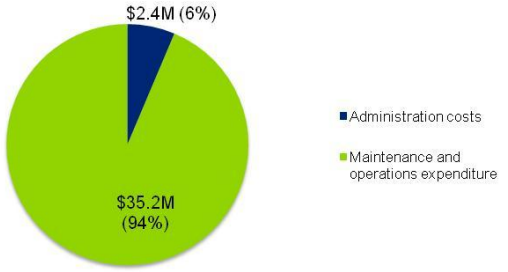
Number of customers: 6,300
Geographic area: 7,000km of river
Services provided include:
- Bulk water delivery for towns, industry, irrigators, stock and domes ic use etc.
- Delivery of environmental flows
- Water account management
- Demand management

Cost allocation methodology (CAM):[2]
- Allocates common and indirect costs on he basis of FTEs
- State Water's operations are split into Valleys. Each Valley is allocated an amount of common and indirect costs proportionate to he number of FTEs it employs
- IPART considered hat using FTEs as key driver of costs in each Valley was most appropriate, given that labour costs made up, on average, 53% of SWC's total direct costs across all Valleys.

Geography:[3]



Administration costs as a percentage of total operating costs:[4]



(1) Source: State Water Corporation 2010, Annual Report 2009-10, p. 4
(2) Source: IPART 2010, Final Report - Review of Bulk Water charges for State Water Corporation, p. 114
(3) Source: State Water Corporation 2010, Annual Report 2009-10, p. 4.
(4) Source: National Water Commission 2010, National Performance Report 2008-09 – Rural water service suppliers, p.39

Gladstone Area Water Board

Key facts:[1]

Services provided include:
- Bulk water through Awoonga Dam
- Distribu ion pipelines
- Treatment plants
- Other bulk water infrastructure

Geography:[2]

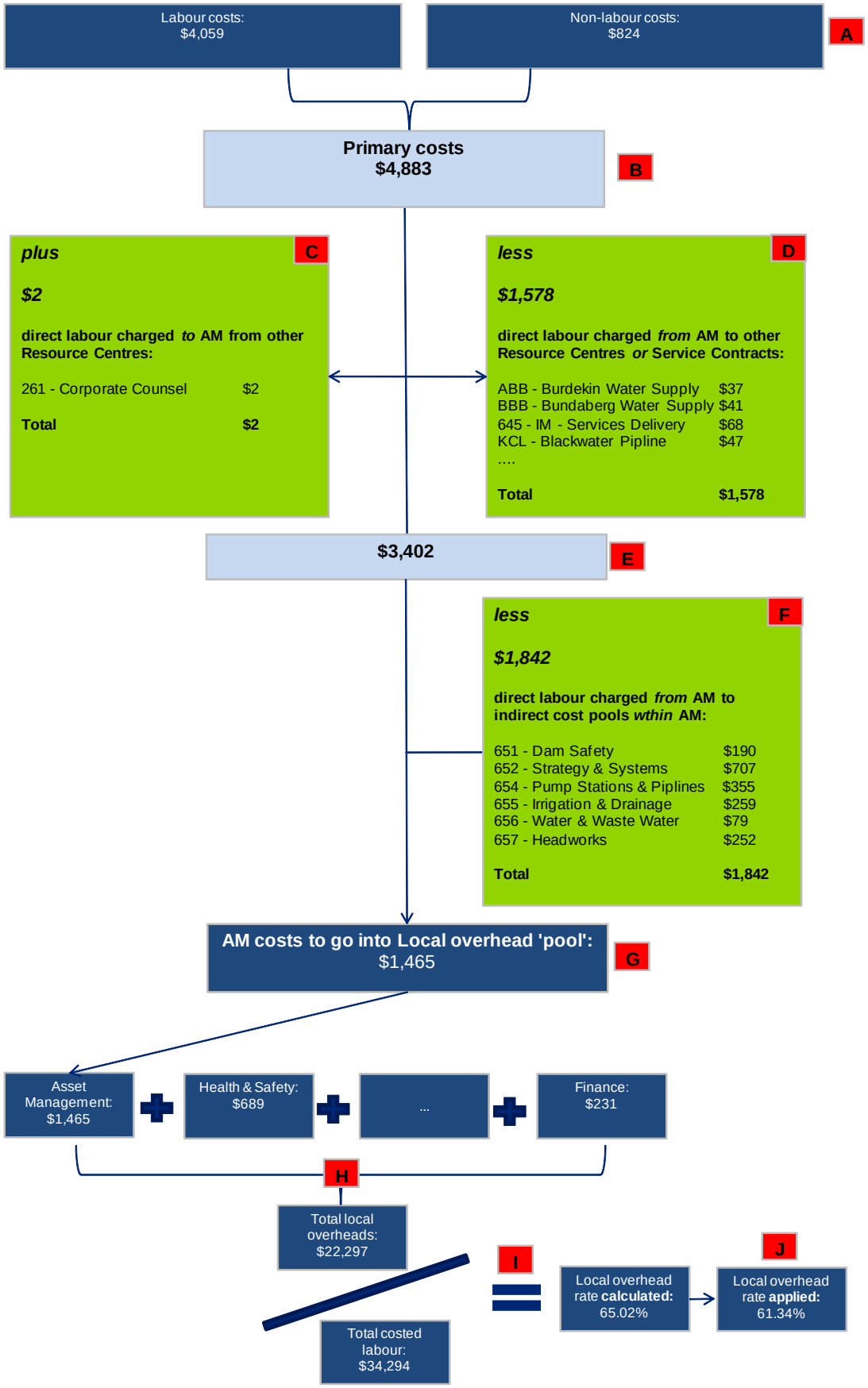
Cost allocation methodology (CAM):[3,4]

- 'System direct costs' - directly attributable to a pricing zone. Allocated to users according to their share of the zone's throughput
- 'System overhead costs' - attributable to raw water or treated water systems (but not to individual pricing zones). Allocated to each zone on he basis of the zone's share of total system direct costs and hen to users according to their share of the zone's hroughput.
- 'General admin costs' - not attributable to a particular system or zone. These costs include customer service type costs such as billing, accounts etc and demand-based costs, and are allocated according to he administra ive effort in each system (dam, raw water delivery and treated water delivery). This relative administra ive effort was approximated by the rela ive direct operating and maintenance costs per mega litre in each system. Weightings were also produced to better capture he administra ive effort required to operate the various systems, which are as follows:
  - 0.5 x ML delivered for supplies out of Awoonga Dam
  - 1.0 x ML delivered for supplies to raw water customers
  - 2.0 x ML delivered for supplies to treated water customers.

(1) Source: Gladstone Area Water Board 2010, Annual Report 2009-10, p. 1
(2) Source: Deloitte analysis
(3) Source: QCA 2005, Final Report - Gladstone Area Water Board: Investigation of Pricing Practices, p.140
(4) Source: QCA 2010, Final Report - Gladstone Area Water Board: Investigation of Pricing Practices, p. 138

Appendix B – Allocation to Schemes worked examples

Figure A: Allocation of Asset Management (Local overhead Resource Centre) overhead costs



Notes

A. Labour costs include:
   - Salaries and wages - $2,970
   - Employee related expenses (TOIL, study assistance, staff training, uniforms, professional memberships etc) - $1,089
   - **Total - $4,059.**

   Non-labour costs include:
   - Travel and accommodation - $164
   - Contractors - $72
   - Electricity - $10
   - Materials - $2
   - Plant, equipment and vehicles - $42
   - Occupancy costs - $357
   - Administration costs $176
   - Depreciation costs (not included in primary costs) - $176
   - **Total - $824**

B. Asset Management's primary costs of $4,883 are comprised of the labour and non-labour costs outlined above.

C. $2 of direct labour costs are charged to Asset Management from Corporate Counsel. The $1 of overhead accompanying this costed labour is not added to Asset Management costs, so as not to add 'overheads to overheads'.

D. $1,578 of direct labour costs are charged from Asset Management to other Resource Centres or Service Contracts. For instance, Services Delivery has $68 of costed labour attributed to it from Asset Management, for services performed for the former by the latter.

E. $3,402 represents Asset Management's primary costs, net of direct labour charges to other Resource Centres/Service Contracts and direct labour charges from other Resource Centres.

F. Asset Management is an overhead cost centre that contains a number of indirect cost centres within it. As an indirect cost centre performs work, direct labour costs are transferred from Asset Management's primary costs to the primary costs of the relevant indirect cost centre. For instance, $190 of Asset Management's labour costs are transferred to Dam Safety. This means that staff members employed by Asset Management have charged $190 of direct labour to Dam Safety, in return for carrying out Dam Safety-related work duties. The sum of all direct labour charged to the six indirect cost pools within Asset Management is equal to $1,842

G. Asset Management's Local overhead costs are $1,465. This is equal to its primary costs net of direct labour cost transfers between Asset Management, its indirect cost pools, Service Contracts and other Resource Centres

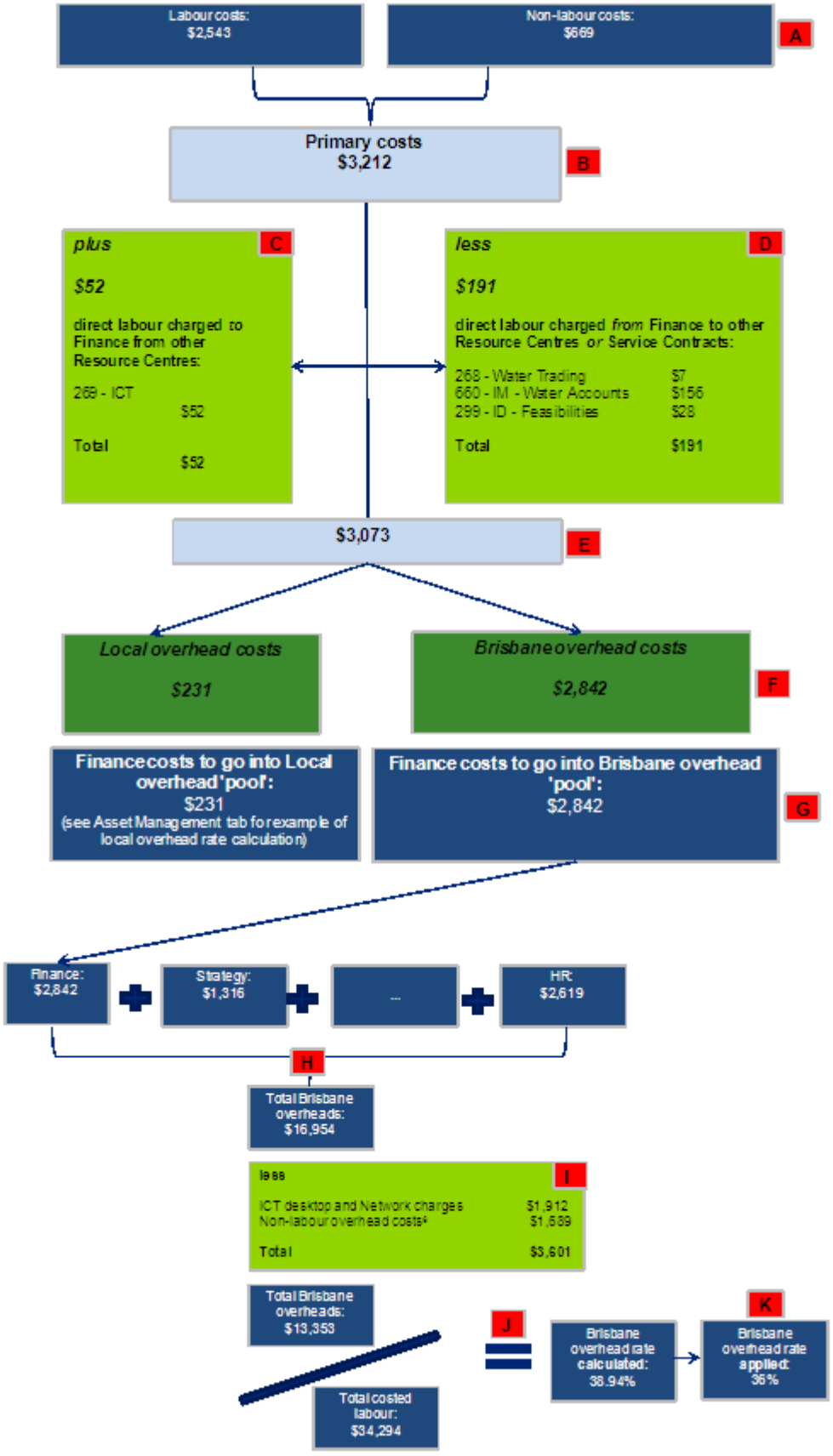
H. Asset Management's Local overhead costs of $1,465 are then inputted into the Local overhead "pool" of costs, along with the Local overheads costs of all other Resource Centres, to form the SunWater-wide local overhead cost pool of $22,297

I. The local overhead cost pool of $22,297 is divided by $34,294 (SunWater's total forecast labour charges to Resource Centres and Service Contracts) to determine a "loading rate" of 65.02%. This rate is then used to apportion the local overhead cost pool across the business; every dollar of direct costed labour charged to a Service Contract or Indirect Cost Centre will attract $0.65 of local overhead. Direct

costed labour charged to Local and Brisbane Overhead Cost Centres does not attract local overhead, so as not to charge "overhead on overhead"

J. The actual "loading rate" rate applied as outlined above is 61.34%. This 3.68% downward adjustment is made in order for SunWater to deliberately under recover its costs. SunWater does this as it recognises some of the costs it incurs are for future projects that may not be carried out. This results in $1,261 of the local overhead cost pool not being recovered, which is SunWater's estimate of the extra costs (i.e. feasibility studies) it is incurring for potential future projects.

Figure B: Allocation of Finance (Mixed Resource Centre) overhead costs



Notes

A. Labour costs include:
   - Salaries and wages - $1,836
   - Employee related expenses (TOIL, study assistance, staff training, uniforms, professional memberships etc) - $624
   - Staff contractors – $84
   - **Total - $2,543**

   Non-labour costs include:

   - Travel and accommodation - $22
   - Contractors - $103
   - Electricity - $5
   - Plant, equipment and vehicles - $17
   - Occupancy costs - $261
   - Administration costs $270
   - Depreciation costs (included in primary costs) - $126
   - Other asset costs - $3
   - Financing charges - $21
   - Revenue from consulting fees - ($159)
   - **Total - $669**

B. Finance's primary costs of $3,212 are comprised of the labour and non-labour costs outlined above.

C. $52 of direct labour costs are charged to Finance from ICT. The $31 of overhead accompanying this costed labour is not added to Finance costs, so as not to add 'overheads to overheads'.

D. $191 of direct labour costs are charged from Finance to other Resource Centres or Service Contracts. For instance, Water Accounts has $156 of costed labour attributed to it from Finance, for services performed for the former by the latter.

E. $3,073 represents Finance's overhead costs. This is equal to its primary costs net of direct labour charges to other Resource Centres/Service Contracts and direct labour charges from other Resource Centres.

F. Finance is considered to be a combination of a Brisbane and a Local overhead Resource Centre, or a "mixed" Resource Centre. As such, its overhead costs needs to be apportioned between the Local overhead cost pool and the Brisbane overhead cost pool. The formula to determine the proportion of Finance overhead costs to go into the first of these two pools is as follows:

   direct labour charges to other RC / labour costs = $191 / $2,543 = 7.5%

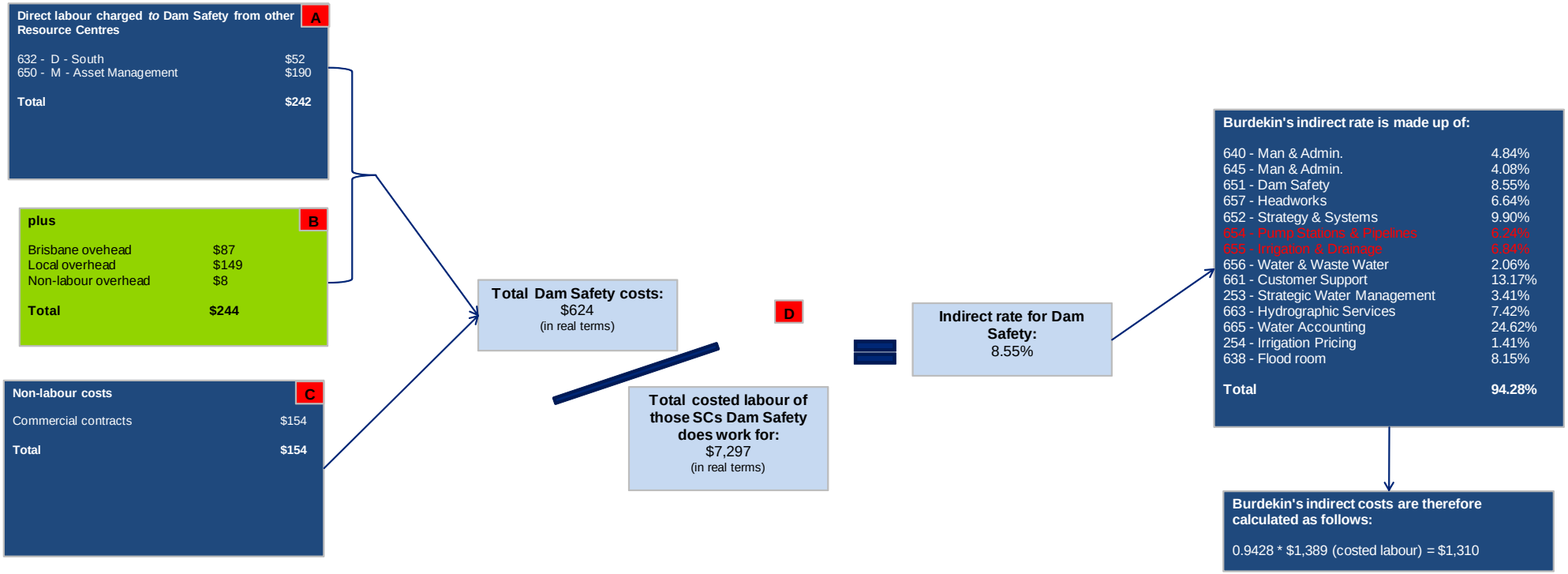
G. As per the above formula, $231 (7.5% of $3,073) is inputted into the Local overhead cost pool. See Asset Management section for an explanation of how this $231 contributed to the determination of the local overhead "loading rate". The remaining $2,842 (92.5% of $3,073) is inputted into the Brisbane local over head cost pool.
H. Finance Brisbane over head costs of $2,842 are aggregated with the Brisbane overhead costs of all other Resource Centres, to form the SunWater-wide Brisbane overhead cost pool of $16,954.
I. The Brisbane overhead cost pool of $16,954 is then adjusted in two ways:
   - ICT desktop and Network charges of $1,912 are subtracted. These costs represent [X]
   - Non-labour overhead costs of $1,689 are subtracted. These costs represent the summation of the 5% materials overhead added to the costs of each Service Contracts. This is done to ensure these

overhead costs are not double counted and allocated to Service Contracts twice. This process essentially transfers overhead costs "out" of the Brisbane overhead cost pool and "into" an overhead designed to estimate centralised procurement costs.

J. The resultant $13,33 of Sunwater-wide Brisbane overhead costs is divided by total forecast direct costed labour ($34,294) to determine a "loading rate" of 38.94%. This rate is then used to apportion the Brisbane overhead cost pool across the business; every dollar of direct costed labour charged to a Service Contract or Indirect Cost Centre will attract $0.39 of local overhead. Direct costed labour charged to Local and Brisbane Overhead Cost Centres does not attract local overhead, so as not to charge "overhead on overhead"

K. The actual "loading rate" rate applied as outlined above is 36%. This 2.94% downward adjustment is made in order for SunWater to deliberately under recover its costs. SunWater does this as it recognises some of the costs it incurs are for future projects that may not be carried out. This results in $1,007 of the Brisbane overhead cost pool not being recovered, which is SunWater's estimate of the extra costs (i.e. feasibility studies) it is incurring for potential future projects.

Figure C: Allocation of Dam Safety (Indirect Resource Centre) indirect costs



Notes

A. Labour costs of $242 are comprised of:

   - $52 charged from Infrastructure Development – South
   - $190 from Asset Management.

B. These labour costs attract the following overhead costs, totalling $244:

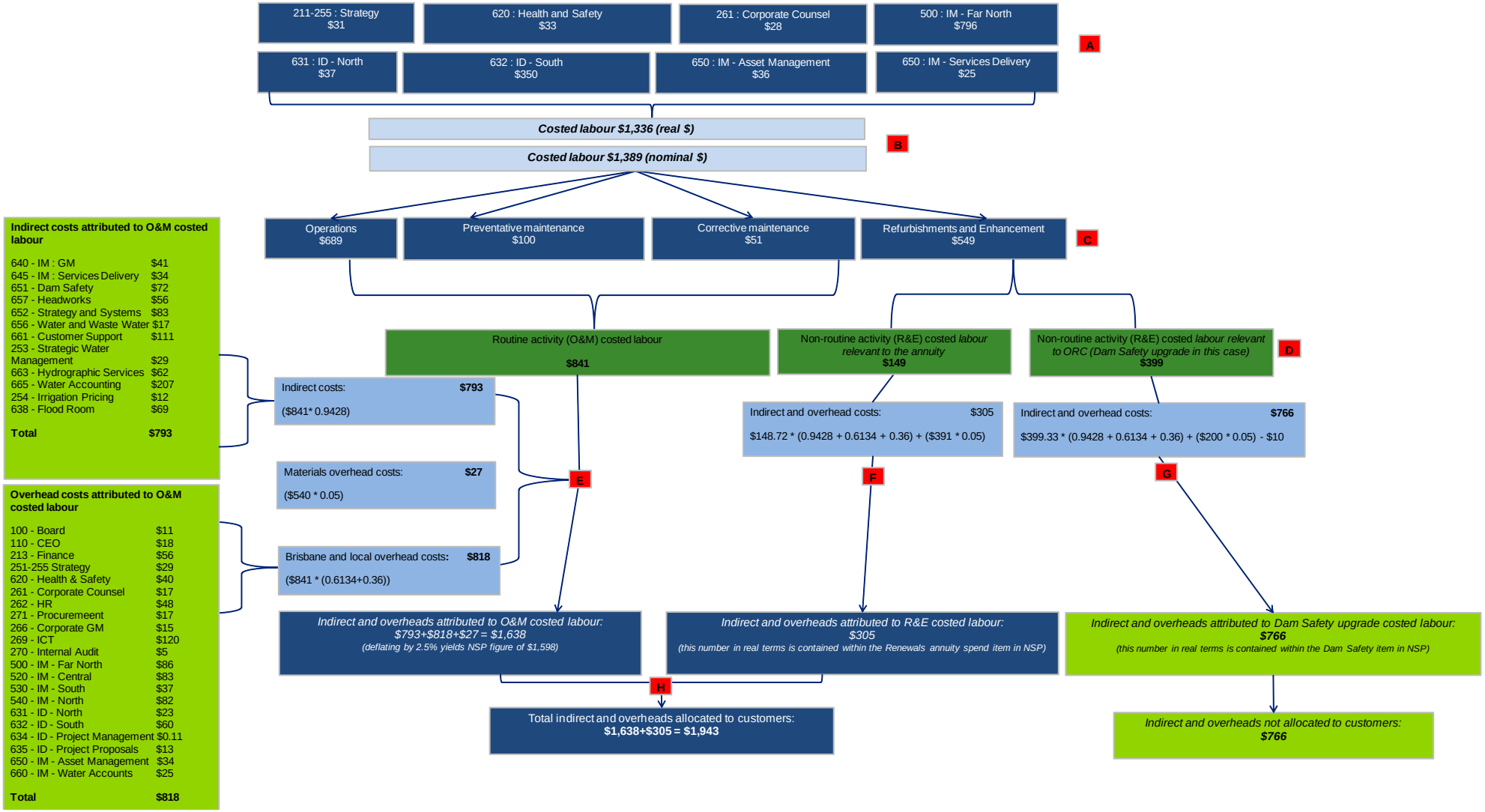
   - $87 of Brisbane overhead (0.36 * 242)
   - $149 of Local overhead (0.6134 * 242)
   - $8 of non-labour overhead (0.05 * 154)

C. Non-labour costs are $154 of commercial contractor costs

D. Dam Safety provides support to all Bulk Water Supply Service Contracts of all contract types (O&M, O&M + Customer Service, O&M + Asset Management and Full Service). As a result, Dam Safety costs are allocated only to these Service Contracts. This is done by dividing total Dam Safety costs ($624) by all direct labour costs charged to Bulk Water Supply SCs ($7,297) to determine a loading rate of 8.55%. This loading rate will appear in the 'indirect rate' used to calculate the indirect costs allocated to each Bulk Water Supply SCs, such as the Burdekin-Haughtin Bulk Water SC (see example in diagram).

Appendix C – Allocation to Customers worked examples

Figure D: Allocation of indirect and overhead costs to Burdekin-Haughton Bulk Water Supply (ABB)



A. This is the composition of ABB's $1,336 costed labour (in real terms), broken down by Resource Centre. For instance, Corporate Counsel has directly charged $28 of its labour costs to ABB

B. ABB's real costed labour of $1,336 can be converted into nominal costed labour through inflating it by an escalation factor of 4% ($1,336 x 1.04 = $1,389)

C. This is the composition of ABB's $1,389 costed labour (in nominal terms), broken down by activity. For instance, of the $1,389 costed labour, $689 represents the portion of this labour cost that can be attributed to employees carrying out operations work.

D. This is the composition of ABB's $1,389 costed labour (in nominal terms) categorised into routine and non-routine costed labour. Operations, preventative maintenance and corrective maintenance (O&M) are considered to be activities that are routine, while refurbishment and enhancement (R&E) is considered to be a non-routine activity. O&M activity labour costs are grouped together ($841), whereas R&E labour costs are further broken down into two categories of non-routine activity (annuity-relevant R&E labour costs and ORC-relevant R&E labour costs). This division of R&E costs is important, as ORC-related costs cannot be recovered, as per the ministerial direction that no return on SunWater's regulated asset base (known as its Optimised Replacement Cost) be recovered.

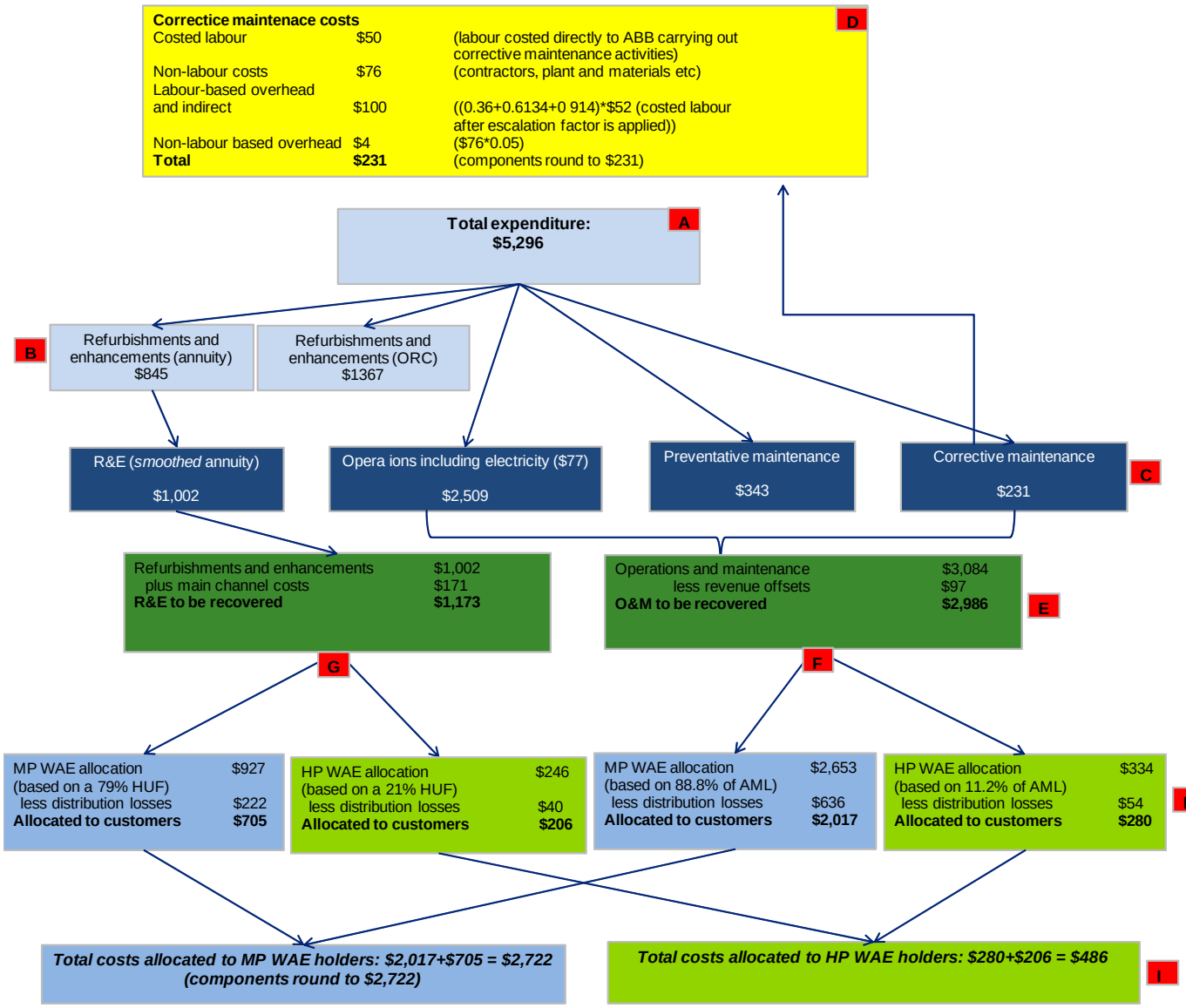
E. These are the indirect and overhead costs that have been allocated to ABB on the basis of its O&M-related labour costs (or routine activity-related labour costs). The indirect costs have been disaggregated into the relevant indirect cost pools, while the overhead costs have been broken down into the relevant Brisbane and Local overhead cost pools. The $27 non-labour based overhead is 5% of ABB's O&M-related non-labour costs ($540, which excludes electricity). The same disaggregation of indirect and overhead costs associated with R&E labour costs can also be performed.

F. These are the indirect and overhead costs ($305) that have been allocated to ABB on the basis of the labour costs ($149) which are recovered through the renewals annuity ($845). That is, of the $845 of R&E costs recovered through the renewals annuity (see Phase 2), $149 of these costs are direct labour, attracting $305 of indirect and overhead costs.

G. These are the indirect and overhead costs ($766) that have been allocated to ABB on the basis of the labour costs ($399) which are not recovered as they are ORC-related costs. That is, of the $1,367 ORC-related costs, $399 of these costs are direct labour, attracting $766 of indirect and overhead costs. None of these costs are allocated to customers. The $10 deduction represents an adjustment to the 5% materials overhead attributed to the Dam Safety upgrade.

H. These are the indirect and overhead costs allocated to customers. They are made up of the indirect and overhead costs identified in E

Figure D: Allocation of Burdekin-Haughton Bulk Water Supply (ABB) total expenditure to customer groups



A. $5,296 is SunWater's total forecast expenditure for the Burdekin Bulk Water Supply Service Contract. Generally speaking, this expenditure is comprised of direct labour costs, direct non-labour costs and indirect and overheads costs ($2,709, which is the sum of all indirect and overhead costs attributed to ABB, regardless of whether these costs are allocated to customers). This is reconciled with the $5,071k of real total expenditure in the NSP by deflating by 2.5% and subtracting real revenue offsets of $95k ($97k nominal), which is a separate item in the NSP.

B. ABB's total R&E costs of $2,212 can be divided into:

   - $845 – R&E costs related to the renewals annuity, including $305 of indirect and overhead costs. These costs are inputted into a renewals annuity formula, which produces a smoothed renewals annuity cost of $1,002, to be allocated to customers

   - $1,367 – R&E costs related to the ORC, including $766 of indirect and overhead costs. These costs are not allocated to customers, as per the Ministerial Directive.

C. This is the composition of the forecast expenditure that is allocated to customers, broken down by activity type:

   - $1,002 – R&E costs recovered via the renewals annuity. Note that this excludes ORC-related costs, and is made up entirely of the smoothed renewals annuity cost ($1,002)

   - $2,509 – Operations (including electricity) costs recovered as part of Operations and Maintenance costs

   - $343 – Preventive maintenance costs recovered as part of Operations and Maintenance costs

   - $231 – Corrective maintenance costs recovered as part of Operations and Maintenance costs.

D. This is a disaggregation of the corrective maintenance costs into labour costs, non-labour costs and indirect and overhead costs, which could also be performed for operations, preventative maintenance, R&E (annuity) and R&E (ORC) costs. The rates in parenthesis for the calculation of "labour-based overhead and indirect" represent the Brisbane overhead rate, the Local overhead rate and the indirect rate for Burdekin-Haughtin Bulk Water Supply, respectively.

E. Two adjustments are made to both R&E costs and O&M costs before they are allocated out to customers. These adjustments are:

   - R&E costs are increased by $171 to reflect "main channel" costs. The Burdekin-Haughton and Bundaberg Schemes contain rivers connected via "main channels". These channels are part of both Schemes' Distribution Service Contracts. The R&E costs related to these channels are charged to the Distribution Service Contract, but are transferred to the Bulk Water Supply Service Contract. This is because in the absence of the Bulk Water Supply Service Contract, the costs would not be incurred by the Distribution Service Contract

- O&M costs are decreased by $97 to reflect revenue offsets. Revenue offsets represent revenue SunWater receives from services such as the provision of recreational land. This reduces the revenue target for the relevant Service Contract, and thus needs to be subtracted from the recoverable costs (as the revenue target reflects these costs).

F. The resultant $3,084 of O&M costs are allocated out to Medium Priority (MP) and High Priority (HP) Water Access Entitlement (WAE) holders based on the Aggregate Mega Litres of WAE held by each of these customer groups. As O&M costs do not vary whether a MP or HP WAE is being delivered, relative AML was judged by SunWater to be the most accurate indicator of each customer group's share of these costs. MP WAE customers hold 88.8% of ABB's WAE, therefore they are apportioned $2,653 of O&M costs (88.8% of $3,084). HP WAE customers are allocated the remaining $334 of O&M costs, based on their 11.2% of AML

G. The resultant $1,173 of R&E costs are allocated out to Medium Priority (MP) and High Priority (HP) Water Access Entitlement (WAE) holders using a Headworks Utilisatation Factor (HUF). The HUF determines the amount of R&E costs that should be attributed to HP and MP WAE holders based on the different levels of capital expenditure required to ensure a HP WAE is available relative to a MP WAE. The HUF used to apportion R&E costs to HP WAE holders is 21%, resulting in this customer group being allocated $246 of R&E costs, or 21% of $1,173. MP customers are allocated the residual $927 of R&E costs, or 79% of $1,173.

   The HUFs are significantly different than the AML held by the two customer groups. For instance, HP WAE customers hold of 11.2% of ABB's AML, yet a HUF of 21% is used to allocate R&E costs to them. This results in these customers being allocated 21% of R&E costs, but only 11.2% of O&M costs. This result reflects the assumption made by SunWater that ensuring the delivery of a HP WAE is more capital-intensive than ensuring the delivery of a MP WAE, but not necessarily more O&M-intensive

H. Once R&E and O&M costs have been allocated to MP and HP WAE holders, the costs resulting from distribution losses are deducted and transferred to the Distribution SC and recovered from its customers. This is necessary because although these costs are charged to the Bulk SC, they should not be recovered by its customers as in the absence of the Distribution SC the costs would not be incurred. This transfer of costs resulting from distribution losses from a Bulk SC to a Distribution SC occurs in all Water Supply Schemes that contain both types of SC (eight occurrences). The costs transferred away from HP and MP WAE customers are $94 and $858, respectively

I. The resultant costs allocated to each customer group are as follows:

   - Total costs allocated to MP WAE holders: $2,017+$705 = $2,722

   - Total costs allocated to HP WAE holders: $280+$206 = $486.

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This report is prepared solely for the use of the Queensland Competition Authority as agreed in our proposal dated 24 December 2011. This report is not intended to and should not be used or relied upon by anyone else and we accept no duty of care to any other person or entity. The report has been prepared as part of the 2010-11 irrigation price review, for the purpose of assessing the efficiency of SunWater's proposed administration costs and the appropriateness of the allocation methodology used to apportion administration costs to irrigation customers. You should not refer to or use our name or the advice for any other purpose.

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