Centre of Full Employment and Equity

An analysis of the increased demands on the Tasmanian State Fire Commission Budget

Report prepared for the United Firefighters Union of Australia, Tasmanian Branch

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Executive Summary

This report was commissioned by the United Firefighters Union (UFU), Tasmanian Branch, to research the effect of the recent change of reporting structure for the State Emergency Service (SES). Effective from the 2014-15 Tasmanian Budget the SES now reports through the Tasmania Fire Service (TFS), essentially meaning the SES reporting is now funded by the State Fire Commission (SFC). In addition, two other recent changes have also had an effect on SFC funding, a Fuel Reduction Burns program and the amalgamation of corporate services across Tasmania's emergency services agencies. This report:

- Considers the functions of the Tasmania Fire Service;
- Presents information on the 2014-15 and 2015-16 Tasmanian Budgets and analyses the fiscal constraint position of the Tasmanian Government;
- Analyses the State Fire Commission Budgets for 2014-15 and 2015-16;
- Analyses the impact of the transfer of reporting of the SES from the Department of Police and Emergency Management to the Tasmania Fire Service in both the 2014-15 and 2015-16 financial years;
- Analyses the impact of the Fuel Reduction Burns program and the amalgamation of corporate services across the emergency services sector in Tasmania;
- Analyses the performance of the Tasmania Fire Service in comparison with the other states and territories of Australia; and
- Considers the adequacy of the resources devoted to fire services in Tasmania.

The Tasmanian Liberal Government took power on 15 March 2014, following the state election. Shortly after, the new Government deferred delivery of the 2014-15 Tasmanian Budget until 28 August 2014. Prior to the election the *Revised Estimates Report 2013-14 (including December Quarterly Report)* was released which identified a deterioration of the Government's fiscal position since the delivery of the 2013-14 Budget. Following the election the new Government commissioned Treasury to conduct an assessment of the risks that would affect the ongoing Budget position. The *Report to the Treasurer: Analysis of Budget Risks* identified a further deterioration of the Government's fiscal position.

The Government delivered the 2014-15 Tasmanian Budget in August 2014, marked with a new fiscal strategy and which signalled a further contractionary stance. A total of $563.4 million worth of savings was announced in the Budget, to be made through a mixture of government and agency savings. Among these was the announcement of the transfer of reporting arrangements for the SES, from the Department of Police and Emergency Management (DPEM) to the TFS.

Despite the larger than expected deficit in 2013-14 and identified risks going into the future, the Tasmanian economy was slightly improving in the first half of 2014. Household spending, retail trade, building approvals and finance commitments, business confidence and private investment all grew for the first half of 2014. The effect of all this was the outcome of the 2013-14 Budget and the expected outcome of the 2014-15 Budget were not as dire as predicted. The 2013-14 Budget overestimated the net operating deficit by $102 million and, similarly, the expected outcome for the 2014-15 net operating deficit, shows a smaller than expected deficit to the amount of $100 million. Net debt was expected to return to positive in 2013-14, but the improving economy allowed net debt to remain negative. Similarly, the estimated outcome for 2014-15 has net debt coming in much lower than predicted in the Budget at $364 million.

The transfer of reporting arrangements for the SES from the DPEM to the TFS had a large effect on the SFC Budget. Previously, the SES had been funded through the DPEM out of

consolidated revenue, but with the revised reporting arrangements, the SES was now to be funded through the SFC. The SFC submitted their Budget for 2014-15 to the Minister and had it approved in May 2014 and in it there was no mention of the SFC being required to fund the SES. However, when the Tasmanian Budget was delivered, it was announced the reporting costs would be covered by the SFC, without an increase in their funding. The SES reporting costs were budgeted for $2.446 million in 2013-14. It has since been reported $400,000 has been transferred to the SFC, still well short of the full costs to cover the SES.

Two other announcements in the 2014-15 Budget had a bearing on the SFC Budget. The new Government had taken to the election a pledge to conduct a Fuel Reduction Burns program, for which they committed $28.5 million over four years. This money has been directed to the Department of Primary Industries, Parks, Water and Environment (DPIPWE), though the program is being overseen by the Fuel Reduction Unit within the TFS. The SFC is contributing over $1.6 million to the program over 2014-15 and 2015-16. In addition, a review of the corporate services of the Tasmanian emergency service agencies has been conducted and the Government has amalgamated the various corporate services divisions across the agencies which, in the short term, has also cut into the SFC Budget.

A conservative estimate puts the extra costs to the SFC of these changes at well over $2.5 million for the 2014-15 financial year. These additional expenditure requirements for the SFC are to remain until at least 2017-18 while the Fuel Reduction Burns program remains in place, after which the SFC will still be required to fund the SES, which at the time is projected to cost the SFC $2.7 million. The most recent estimate for the 2014-15 financial year predicts that the SFC net operating deficit will be $3.4 million greater than projected in the original budget, taking it to over $7 million. The SFC could do nothing about the shortfall in expenditure in 2014-15, as its budget had already been submitted, but increased its revenue for 2015-16. The Fire Service Contribution, levied on ratepayers and collected through local councils, was increased above the projected amount, providing additional revenue for the 2015-16 financial year. However, this will not be sufficient to meet the increased costs and the SFC will see large deficits through the Forward Estimates period. The improved position for the Government when it delivered the 2015-16 Budget was marked by a commitment by the Government to implement no new structural savings. However, further assistance to the SFC to assist it in meeting its increased funding requirements has been limited.

There are two main consequences of this increased demand on SFC funds, without sufficient reimbursement to meet the extra demands. The first is that the SFC is forced to make spending cuts that it had not budgeted for. Cuts to repairs and maintenance, equipment under $2,000 and financial and other expenses have been made from projected levels. In addition, the capital expenditure program in the current year and into the future has seen large cuts, especially to programs such as the Fire Fighting Truck Replacement Program and the upgrading of Land and Buildings.

The second consequence of the extra demand on SFC funds is the inability of revenue to meet expenses and the inevitability of the SFC to begin a spiral of operating deficits. The cash position of the SFC was expected to be very close to zero at the end of 2014-15. The latest estimate in the 2015-16 Budget has cash at hand at less than $1 million at the end of 2014-15. This has forced the SFC to borrow $1.5 million in 2015-16. Given the deteriorating position of the operating balance in the interim, it is expected that more will have to be borrowed in the current financial year. Further, cash at hand is expected to be below zero for each of the years in the Forward Estimates, implying further borrowing will be required. Of course, servicing a loan is expenditure that is not used elsewhere and will place further strain on the Budget going forward, as well as the need to reduce the debt.

The provision of fire services involves striking a balance between the fiscal constraints that governments operate under and the need to adequately protect the community from fire to prevent loss of life and property. The Budget problems facing the SFC come in an environment that is already underperforming relative to the rest of Australia and under pressure to improve its own performance benchmarks.

A comparative analysis of the states and territories across Australia shows that Tasmania performs relatively poorly on most of the key indicators. Tasmania has a higher proportion of people who are identified as being at greater risk and more vulnerable to negative fire event outcomes. This is due to the demographic and socio-economic characteristics of the state: a more elderly population, people who consume more alcohol, lower employment engagement, lower incomes, less educated and more people with disabilities requiring assistance. In addition, Tasmania has a much larger incidence of fire relative to population than the national average, a higher than average fire death rate and high insurance claims per person. The general consensus in the international literature is that more lives and property are lost the longer it takes fire services to arrive and Tasmania has poor results in terms of response times to fires and confinement of fires to room of origin relative to the rest of the country.

Despite this, Tasmania still lags behind the national average in terms of resources given to its fire service. Expenditure on fire services per person is slightly under the national average, while the amount of government funding per person is very small compared to the rest of the country. Tasmania has slightly below the national average career firefighters relative to population, but about average volunteer firefighters.

To reach the national average ratio of career firefighters to population Tasmania would need 326 career firefighters, an increase of 10.5 per cent on current levels. As population is expected to increase, these numbers would need to also increase, such that by 2046, at which point population in Tasmania is projected to plateau, Tasmania would need 361 career firefighters. The impact of climate change on Tasmania will require additional resources to be directed towards the fire service, including a further increase in the number of firefighters. Based on modelling of possible climate change scenarios, Tasmania could require between 367 and 395 by 2030.

The Tasmania Fire Service is in a precarious position in terms of being able to divert funding and resources to other non-fire related activities. Tasmania faces increased risks and experiences relatively bad fire outcomes and relies on the funding and resources it gets. Placing extra demands on the budget of the SFC means it can direct fewer funds to maintaining and improving the TFS. The new funding arrangements now covered by the SFC will result in either an unsustainable budget position for the SFC, or neglect of the upkeep and maintenance of the TFS.

1. Introduction

1.1 Purpose of the report

The Centre of Full Employment and Equity (CofFEE) was commissioned by the United Firefighters Union (UFU), Tasmanian Branch, to research the effect of the recent change of reporting structure for the State Emergency Service (SES). Effective from the 2014-15 Tasmanian Budget the SES now reports through the Tasmania Fire Service (TFS), essentially meaning the SES reporting is now funded by the State Fire Commission (SFC). In addition, two other recent changes have also had an effect on SFC funding, a Fuel Reduction Burns program and the amalgamation of corporate services across Tasmania's emergency service agencies. This report builds on a previous report completed by CofFEE (Cook *et al.*, 2012) which focussed on funding cuts to the TFS in the 2011-12 Budget. This report:

- Considers the functions of the Tasmania Fire Service;
- Presents information on the 2014-15 and 2015-16 Tasmanian Budgets and analyses the fiscal constraint position of the Tasmanian Government;
- Analyses the State Fire Commission Budgets for 2014-15 and 2015-16;
- Analyses the impact of the transfer of reporting of the SES from the Department of Police and Emergency Management (DPEM) to the Tasmania Fire Service in both the 2014-15 and 2015-16 financial years;
- Analyses the impact of the Fuel Reduction Burns program and the amalgamation of corporate services across the emergency services sector in Tasmania;
- Analyses the performance of the Tasmania Fire Service in comparison with the other states and territories of Australia; and
- Considers the adequacy of the resources devoted to fire services in Tasmania.

1.2 Background to the 2014-15 Tasmanian Budget

The Tasmanian Liberal Government took power on 15 March 2014, following the state election where it won 15 of the 25 lower house seats. Shortly after, the new Government deferred delivery of the 2014-15 Tasmanian Budget until 28 August 2014. In delaying the delivery of the 2014-15 Budget the Government cited the need for the Budget to be careful and considered in light of the fiscal situation the Government was in.

The Government formulated the Budget after receiving two key reports in the first part of 2014. The *Revised Estimates Report 2013-14 (including December Quarterly Report)* – formerly the Mid-Year Financial Report – was released in February 2014 and it showed a decrease in the Net Operating Balance of $109 million for the 2013-14 Financial Year and $339.5 million over the Forward Estimates period (DTFT, 2014a). After the election the Government deferred delivery of the Budget and asked Treasury to provide an assessment of the risks which were highlighted in the revised estimates report. This *Report to the Treasurer: Analysis of Budget Risks* was released in April 2014 and outlined a further deterioration of $207.8 million in the Forward Estimates for the period from 2014-15 to 2016-17 (DTFT, 2014b). Net debt was forecast to exceed $400 million in 2016-17. The 2013-14 Budget that followed were heavily influenced by the information in the two reports.

The Revised Estimates report identified a range of parameter adjustments, changes due to the economic environment, the agency operating environment or the timing of a transaction. They reflect the impact of changes to revenue and expenses that do not occur due to a Government decision. Among many parameter adjustments, the report identified the following major variations:

- A large reduction in Dividend, Tax and Rate Equivalent Income from Government Businesses, primarily due to the Australian Government's intention to remove the Carbon Pricing Scheme, which would have a major effect on the returns of Hydro Tasmania;
- A reduction in GST revenue;
- A reduction in revenue from Mineral Royalties;
- A reduction in revenue from Monetary Penalties;
- A reduction in Interest Revenue;
- Additional net expenditure from the Australian Government Funding Management Account;
- Additional expenditure for the Tasmanian Forest Agreement;
- A provision for additional Tasmanian Health Organisations expenditure; and
- Increased depreciation expenses.

There were slight improvements in State own-source revenue which partially offset the negative impacts listed above.

The Analysis of Budget Risks report identified two main causes for the deterioration:

- A fall in the revenue gained from the GST; and
- A fall in the revenue from Mineral Royalties.

In analysing the position of the Budget, Treasury identified a number of key risks:

- Inherent uncertainty in GST and other Australian Government funding;
- Agencies having difficulty in achieving required/implied savings due to the ongoing impact of the Global Financial Crisis (GFC);
- Future wage agreements;
- The requirement to match the Australian Government's funding offer for the Australian Government Infrastructure Investment Program – Roads and Rail;
- Additional costs associated with the Equal Remuneration Order (ERO);
- Possible ongoing over-expenditure by the Tasmanian Health Organisations (THOs);
- Potential for additional State Government funding for the Tasmanian Railway; and
- Possible increased funding required for the Royal Hobart Hospital redevelopment.

As a result of this position, Treasury concluded the Net Operating Balance would remain in deficit for the 2014-15 Budget and Forward Estimates period.

Subsequent to the release of these two reports the Australian Government delivered its 2014-15 Federal Budget. In it they announced the cessation or variation of Australian Government funding to the states and territories, the impact to Tasmania of which was estimated to be $2.1 billion over the period to 2024-25 (Tasmanian Government, 2014a: 1.2).

Despite this larger than expected deficit and identified risks going into the future, the Tasmanian economy was slightly improving in the first half of 2014. Household spending, retail trade, building approvals and finance commitments, business confidence and private investment all grew for the first half of 2014, some strongly. In addition employment grew, but unemployment did not decrease due to a stronger participation rate.

1.3 Transfer of reporting arrangements for the State Emergency Service

In the 2014-15 Tasmanian Budget the Government announced that one of their savings strategies was to have "the State Emergency Service reporting through the Chief Fire Officer to achieve economies of scale and eliminate duplication of services." (Tasmanian Government, 2014a). Prior to this the SES reported through the DPEM. In making these changes the Government identified that these management arrangements will better reflect the close alignment of the SES and the TFS: "The SES and the State Fire Commission have many synergies; they both have a large pool of dedicated volunteers, work together on emergency incidents and many of their premises are collocated." (Tasmanian Government, 2014b: 7.3).

This announcement in the 2014-15 Budget was in conflict with the SFC Budget submitted and approved by the Minister in May 2014. The SFC had not included commitments to the SES in their expenditure plan for 2014-15 and could not receive any extra funding to cover this. Yet the SES reporting costs which were previously covered by the DPEM through consolidated revenue were now to be covered in the SFC Budget. This was set at $2.446 million in the 2013-14 Budget with a Forward Estimate for 2014-15 of $2.494 million (Tasmanian Government, 2013).

In addition the Government had made an election commitment to implement fuel reduction burns, for which they were committing $28.5 million to over four years. This funding was to go to the Department of Primary Industries Water and the Environment (DPIPWE), but the Fuel Reduction Unit, the primary organiser of the program is within TFS and the SFC have been required to contribute significant funds to the program out of their existing Budget.

Finally, shortly after the delivery of the 2014-15 Tasmanian Budget a report reviewing corporate services across the emergency service departments in Tasmania was handed down. This report, which suggested the amalgamation of corporate services from the different emergency service departments into the one, also cut into the SFC Budget in the short term.

1.4 Terms of reference

The Centre of Full Employment and Equity (CofFEE) was commissioned by United Firefighters Union, Tasmanian Branch, to analyse the situation of the Tasmania Fire Service in light of the announcements in the 2014-15 Tasmanian Budget. The report will:

- Present information on the Budget positions of both the Tasmanian Government and the Tasmania Fire Service;
- Analyse the impact of the transfer of reporting of the State Emergency Service from the Department of Police and Emergency Management to the Tasmania Fire Service as well as the impact of the Fuel Reduction Burns program and corporate services review; and
- Analyse the performance of the Tasmanian Fire Service in comparison with other states and territories in Australia and consider the adequacy of the resources devoted to fire services in Tasmania.

1.5 Outline of report

The report is structured as follows:

- Section 2 presents an overview of the TFS;
- Section 3 provides details of the Tasmanian Budgets for 2014-15 and 2015-16;
- Section 4 examines the impact of the increased demands on the funding of the SFC through analysing the SFC Budgets for 2014-15 and 2015-16;
- Section 5 examines the risk profile in Tasmania in relation to the other states and territories in Australia and compares data on fire service resources, fire incidents and the response to them, as well as outcomes from fire events;
- Section 6 focusses on Tasmania in how it performs relative to its targets, as well as looking at the adequacy of fire services in Tasmania and the effect climate change will have on the requirement for firefighters; and
- Section 7 summarises the findings.

2. The Tasmania Fire Service

Three organisations are responsible for responding to fires in Tasmania and all are represented on the State Fire Management Council (SFMC):

- The Tasmania Fire Service (TFS) is responsible for all structure fires as well as fires on all private lands, unallocated Crown Land and in the Wellington Park;
- The Parks and Wildlife Service (PWS) has responsibility for the management of bushfire on reserved land around the state, which accounts for approximately 40 per cent of the total Tasmanian land area; and
- Forestry Tasmania (FT) has responsibility for the management of bushfire on all 1.5 million hectares of State forest.

TFS, PWS and FT work closely together, particularly providing response to bushfires on Crown Land, in National Parks and in State Forests. The three organisations have an interagency protocol in place which has the stated purpose: "to ensure that the management and suppression of fires in Tasmania is safe, efficient and cost effective" (AFAC, 2013: 20). FireComm is the centralised call receipt, dispatch and communications centre for the TFS and also receives and records all incident information in relation to bushfires on land managed by FT and PWS. The 2013-14 SFC Annual Report states:

> A total of 10,901 emergency incidents were handled by FireComm during the 2013-14 reporting period. These figures reflect incidents where TFS resources were deployed, 83 bushfire incidents where the sole respondent was either FT or PWS, and three incidents where SES was the sole respondent (SFC, 2014b: 16).

This section provides an overview of the TFS, including its role, goals, structure, functions and major revenue sources.

2.1 Goals and objectives of the SFC and TFS

The primary role of the SFC is "to protect life, property and the environment from the impact of fire and other emergencies" (SFC, 2014b: 4). The TFS is the operational arm of the SFC, through which the SFC delivers all its services. The TFS is tasked with providing timely and effective responses to emergencies, as well as implementing strategies to develop community self-reliance to prevent and prepare for fires. The major goals and expected outcomes of the SFC are shown in Table 2.1

Table 2.1 Major goals and expected outcomes of the SFC

Major Goals	Expected Outcomes
Be a leader in emergency management and inter-agency relations	More effective and efficient emergency management arrangements for the Tasmanian community
Build community capacity to prevent, respond to and recover from fires and other emergencies	A safer and more resilient Tasmanian community
Deliver safe, effective and efficient strategies for preventing, preparing for and responding to fires and other emergencies	Fewer fire fatalities and injuries and less fire-related damage
Be an adaptive, relevant, resilient and sustainable organisation	An effective organisation, capable of responding effectively to change
Be a socially and environmentally responsible organisation	An organisation respected by the Tasmanian community

Source: SFC (2014b)

2.2 Structure and functions of the TFS

The TFS was created in 1979 following the passing of the *Fire Service Act 1979* on 1 November 1979 and combined the urban and rural fire services. The major functions of the TFS include responding to fires and emergencies throughout Tasmania. In addition the TFS is responsible for fire prevention and fire safety education.

TFS roles include:

- Emergency response and suppression of all types of fires;
- Marine and aviation response;
- Urban search and rescue;
- Vertical rescue;
- Hazmat incidents;
- Road crash rescue;
- Community fire education and training;
- Fire equipment sales and service;
- Fire alarm monitoring; and
- Fire investigation.

Traditionally the TFS has been structured into four divisions. Since the review into Corporate Services across the DPEM there are now only three TFS divisions:

- The Community Fire Safety Division focusses on delivering programs that improve fire safety in the home, workplace and other locations, such as healthcare facilities and schools. Programs they run include the School Fire Education Program, the Juvenile Fire Lighter Intervention Program and *Project Wake Up!*
- The Human Services Division provides strategic human resources policy, systems and advice, including volunteer support, occupational health and safety, learning and development systems, recruitment and remuneration, employee relations, leadership and performance systems.
- The Operations Division undertakes emergency response as well as providing training to career and volunteer firefighters. The state is divided into three regions (Southern, Northern and North West) as well as ten districts, shown in Figure 2.1. There are career brigades located in the major urban centres of Hobart, Launceston, Devonport and Burnie. The rest of the state is serviced by 232 volunteer brigades. Emergency response is coordinated through FireComm, the Statewide Control Centre, which is a call receipt, dispatch and communications centre. Its duties may also involve dispatching PWS or FT staff if necessary.

Corporate Services traditionally provided support services such as finance, administration, communications, information management and engineering services. Following the review of corporate services in the emergency service agencies (WLF, 2014), the TFS Corporate Services was integrated within the broader DPEM. This resulted in the functional responsibilities for Corporate Services being split between the two existing directors (TFS, 2015).

Figure 2.1 TFS Districts

Source: SFC (2014b)

2.3 Revenue sources

There are various ways the SFC earns revenue to fund the activities of the TFS. The composition of funding from the different streams for 2013-14 is shown in Figure 2.2. Revenue sources include:

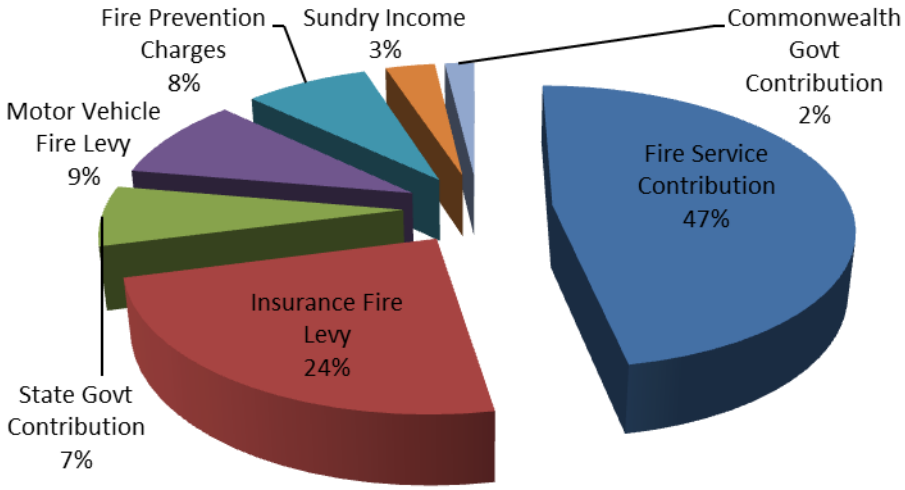
- Fire Service Contribution – these are collected from local councils through a contribution raised on properties. This is the only major revenue source the SFC has direct control over and, despite the SFC basing increases in line with the Consumer Price Index (CPI), in recent years the contribution has been larger than the CPI. The minimum contribution was $36 for 2013-14, increased from $35 on 1 July 2012;
- Insurance Fire Levy – these are received from insurance companies in respect of premium income on certain prescribed classes of insurance, where the risks insured are situated in Tasmania. In 2013-14 the insurance fire levy was 28 per cent on most classes of insurance, 2 per cent on marine cargo and 14 per cent on aviation hull insurance;
- Motor Vehicle Fire Levy – these are raised through a fire levy applied to all registered vehicles, via the vehicle registration fee. The fire levy was $16 per vehicle in 2013-14. This levy is subject to movements in the CPI;
- Fire Prevention Charges – this represents income earned through the sale, inspection, recharging and maintenance of fire safety equipment, training and provision of other

fire prevention services throughout Tasmania. It also includes plan approval fees, avoidable false alarm charges and fire investigation reports;

- State Government Contribution – section 101 of the *Fire Service Act 1979* states "The Treasurer must pay to the Commission, out of money appropriated by the Parliament for the purpose, such amount as the Treasurer determines is appropriate towards defraying the operating costs of the Commission." In addition to a regular grant, the State Government reimburses bushfire fighting costs. Hence, in 2013-14 the State Government contribution made up 7 per cent of revenue, but in 2012-13 was 19 per cent of revenue due to the severity of the bushfire season that year;
- Commonwealth Government Contribution – this is an annual contribution the Federal Government pays towards the operating of brigades; and
- Sundry income for 2013-14 included reimbursements from PWS and FT for bushfire fighting, reimbursements from the ambulance service for shared facilities, road crash rescues, reimbursements for interstate and overseas deployments and workers compensation refunds.

Pensioners and health care card holders receive discounts on the Fire Service Contribution and the Motor Vehicle Fire Levy.

Figure 2.2 Composition of SFC revenue, 2013-14



Source: SFC (2014b)

3. The 2014-15 and 2015-16 Tasmanian Budgets

3.1 Fiscal situation prior to the 2014-15 Budget

The Tasmanian Liberal Government took power on 15 March 2014, following the state election, where it won 15 of the 25 lower house seats. Shortly after, the new Government deferred delivery of the 2014-15 state Budget until 28 August 2014.

The Tasmanian Government cited a "challenging financial and economic environment" (Tasmanian Government, 2014a, p. 1.2) in which it prepared its 2014-15 Budget. This Budget continued the contractionary fiscal stance that the previous Labor Government had taken for many years, in their case citing the ongoing impact of the Global Financial Crisis (GFC) and the structural change being undertaken in the Tasmanian economy in response to a changing external environment.

The former Government had introduced a new Fiscal Strategy in 2011-12 that aimed to reflect the financial challenges being faced by Tasmania. This new Strategy included a focus on greater accountability through stronger focus on key measures and challenging targets, it simplified the calculation of fiscal strategy targets and increased the medium to long-term focus of the strategy. Specifically, the new targets focussed on the short-term (the current financial year – 2011-12), the medium term (2014-15) and the long term (2022-23).

In the years prior to the 2014-15 Budget, Budget expenditure outcomes were inconsistent with projections. The *Revised Estimates Report 2013-14 (including December Quarterly Report)* – formerly the Mid-Year Financial Report – released in February 2014, showed a decrease in the Net Operating Balance of $109 million for the 2013-14 Financial Year and $339.5 million over the Forward Estimates period (DTFT, 2014a). In response to this the Government tasked Treasury with evaluating identified risks to the Government's fiscal position in the near future. In April 2014 the *Report to the Treasurer: Analysis of Budget Risks* was released and outlined a further deterioration of $207.8 million in the Forward Estimates for the period from 2014-15 to 2016-17 (DTFT, 2014b). Net debt was forecast to exceed $400 million in 2016-17. This further deterioration was primarily due to decreases in the estimates for the Goods and Services Tax (GST) and revenues received from mineral royalties. These impacts on the Budget were noted as highlighting Tasmania's significant vulnerability to external impacts, in particular, Tasmania's reliance on the Federal Government for funding, which makes up 61 per cent of Tasmania's General Government revenue (Tasmanian Government, 2014a).

The economic environment leading up to the 2014-15 Budget was also considered challenging. Tasmania's unemployment rate remained well above the national average, despite household spending recently returning to growth, along with improving household confidence, business confidence and private investment. In addition Tasmania's economy remained highly exposed to the stronger Australian dollar and falling commodities prices.

3.2 New Fiscal Strategy

The Government introduced a new Fiscal Strategy in the 2014-15 Budget. In developing the Fiscal Strategy the Government was led by the principles of sound fiscal management set out in the Charter of Budget Responsibility Act 2007. In addition the Budget identified five Fiscal Principles:

- Managing the State's finances for the wellbeing of all Tasmanians;
- Looking to the future;
- Managing for the unexpected;

- Improving services to Tasmanians and building a strong economy; and
- Allocating public resources to gain maximum community benefit.

Previous Fiscal Strategies included specific numerical targets at certain time frames into the future. This new Fiscal Strategy instead develops a set of Strategic Actions that are focussed on the long-term and do not involve numerical targets. Further, the indicators for the Strategic Actions are not constrained to the same set throughout the life of the Strategy, but will vary depending on the economic and fiscal circumstances at the time. Even the Strategic Actions themselves may change in the long run in order to support the Fiscal Principles.

Strategic Actions:

1. Annual growth in General Government operating expenses will be lower than the long-term average growth in revenue.

2. General Government debt and defined benefit superannuation liabilities will be managed to ensure the combined annual servicing cost is less than six per cent of General Government cash receipts.

3. A competitive tax environment will be maintained with an objective for state taxes to be efficient, fair, simple, stable and sustainable.

4. Government businesses will be required to deliver services to Tasmanians at the lowest sustainable cost, while also providing an appropriate financial return to the Government.

5. Tasmanian Government infrastructure investment will maintain existing assets, respond to economic and population growth and reflect the changing needs of the community.

6. Public sector efficiency, productivity and financial transparency will be improved.

3.3 Budget balances from the 2014-15 and 2015-16 Budgets

This section outlines revenues and expenses using both the 2014-15 and 2015-16 Budgets for those financial years and their respective Forward Estimates periods.

Revenue

Table 3.1 details the revenue outcomes for the 2013-14 Financial Year and the estimated revenues outlined in the 2014-15 Budget and Forward Estimates and the average annual growth rate. At the time total revenue was expected to increase from $4,910 million in 2013-14 to $5,257.4 million in 2017-18. This is below the long run trend of 4.6 per cent per annum, mainly due to a reduction in the sales of goods and services and dividends, tax and rate equivalents.

The more recent 2015-16 Budget updates the current year estimates as well as the Forward Estimates, which are shown in Table 3.2. As can be seen, more revenue was collected in 2014-15 than was expected and there is now a much greater outlook for revenue than was thought nine months earlier. Only revenue from taxation and from fines and regulatory fees will decrease compared to their 2014-15 outlook over the common Forward Estimates period. Further, the annual increase in total revenue is estimated to be 2.8 per cent from 2015 to 2019, compared with only 1.7 per cent from 2014 to 2018 outlined in the 2014-15 Budget.

Table 3.1 Revenue items, 2013-14 to 2017-18, 2014-15 Budget

	2013-2014 Outcome $m	2014-2015 Budget $m	2015-2016 Estimate $m	2016-2017 Estimate $m	2017-2018 Estimate $m	Annual Change %
Grants	2,972	3,027.5	3,301.5	3,303.7	3,329.5	2.9
Taxation	957	983.2	1,019.2	1,053.6	1,070.7	2.8
Sales of goods and services	395	354.1	353.7	354.5	360.5	-2.3
Fines and regulatory fees	94	103.3	105.8	107.8	102.3	2.1
Interest income	13	15.9	16.4	15.3	14.3	2.4
Dividends, tax and rate equivalents	325	342.9	155.0	162.7	248.4	-6.4
Other revenue	153	136.8	134.8	132.4	131.6	-3.7
Total Revenue	**4,910**	**4,963.7**	**5,086.3**	**5,130.0**	**5,257.4**	**1.7**

Source: Tasmanian Government (2014a), DTFT (2014c)

Table 3.2 Revenue items, 2014-15 to 2018-19, 2015-16 Budget

	2014-2015 Outcome (Est.) $m	2015-2016 Budget $m	2016-2017 Estimate $m	2017-2018 Estimate $m	2018-2019 Estimate $m	Annual Change %
Grants	3,094.3	3,453.3	3,530.4	3,558.4	3,736.7	4.8
Taxation	998.4	1,027.1	1,041.7	1,059.1	1,080.1	2.0
Sales of goods and services	357.0	357.8	355.1	362.7	367.9	0.8
Fines and regulatory fees	92.9	96.1	97.8	91.7	86.6	-1.7
Interest income	18.2	16.7	16.4	19.3	20.5	3.0
Dividends, tax and rate equivalents	369.1	213.4	218.7	355.4	241.8	-10.3
Other revenue	150.6	143.4	140.4	139.7	144.0	-1.1
Total Revenue	**5,080.6**	**5,307.8**	**5,400.5**	**5,486.3**	**5,677.6**	**2.8**

Source: Tasmanian Government (2015a)

The major source of revenue to the Tasmanian Government comes in the form of grants from the Federal Government, making up approximately 65 per cent of revenue in 2014-15. The main source of Federal Government grants are income received through the Goods and Services Tax (GST), which is roughly two-thirds of the Federal Government grant revenue to Tasmania. After falling in the year immediately after the onset of the GFC, GST revenue to Tasmania has since risen moderately each year and in the last few years actual revenue outperformed the projected revenue in the Budget. The 2014-15 projection for GST revenue for Tasmania was slightly less than it was in the 2013-14 Budget, but has risen again in the 2015-16 Budget as a result of a greater GST pool growth and an increase in Tasmania's GST per capita relativity.

While the GST revenue to Tasmania may be used at the State's discretion, other Federal Government grants are tied to specific purposes or projects. The National Partnership Payments (NPPs) from the Federal Government saw an increase from 2014-15 to 2015-16 reflecting increases in funding under the Land Transport Infrastructure program for roads and

the Water for the Future program. However, after 2015-16 the NPPs are projected to decrease to about $90 million in 2017-18 following the cessation of projects, which will primarily affect pensioners and seniors (Tasmanian Government, 2014a). The amount of GST to Tasmania as a proportion of total grants is increasing across the Forward Estimates.

Taxation is the primary source of state-generated revenue, making up nearly 20 per cent of revenue in financial years 2014-15 and 2015-16. Over half of the projected increase in state-generated taxation from 2013-14 to 2014-15 and again from 2014-15 to 2015-16 comes from conveyance duty, an increase of 18 and 16 per cent respectively. This reflects an increase in residential sales coupled with median house price increases. Conveyance Duty relief was removed for first home buyers as part of the 2011-12 Budget. Most other categories of taxation will see standard growth, aside from Insurance Duty and Motor Tax, which will be reduced from 2016-17 due to the unwinding of the tax rates and duty in line with a 2014 election promise.

Sales of goods and services brought in significantly more revenue than projected for the 2013-14 financial year and forecasts for 2014-15 and 2015-16 were much lower than the 2013-14 result. The expected outcome for 2014-15 shows it will be close to expectations, which means a significant decrease of about 10 per cent between the two years. Less than 1 per cent growth per annum is expected over the Forward Estimates.

The largest revenue decrease is in dividend, tax and rate equivalent income, which will decrease significantly from 2014-15 to 2015-16 before smaller increases over the Forward Estimates period. The decrease is largely due to a special dividend by the Motor Accidents Insurance Board in 2014-15 as well as a reduction in ordinary dividends from Hydro Tasmania from 2015-16. The latter is a result of lower wholesale electricity prices due to the removal of carbon pricing resulting in lower profitability for Hydro Tasmania.

Expenses

Table 3.3 details the Government expenses outlined in the 2014-15 Budget. At the time total expenses were forecast to increase by an average of 1.4 per cent per annum from the 2013-14 outcome across the Forward Estimates period. Table 3.4 updates the expenses from the 2015-16 Budget, with the first column detailing the estimated outcome of 2014-15 expenses. Overall the forecasts were fairly accurate with the total expenses coming in just 0.3 per cent higher. The largest percentage increase in expenses is due to come from nominal superannuation interest which is expected to increase by 5 per cent annually from the 2013-14 outcome to 2017-18. The two smallest categories of expenditure will both further decrease in their relative makeup of total expenses with borrowing costs reducing by 4.2 per cent and other expenses by 3.9 per cent per annum.

The largest expense item is employee expenses which comprised 43 per cent of total expenses for 2013-14, but decreases to 41 per cent for each year covered in the 2014-15 Budget and Forward Estimates (42 per cent in the 2015-16 Budget). This was to reflect the implementation of a 12-month pay pause on public servants announced by the Government in the 2014-15 Budget. This was done as part of Strategic Action 6 of the New Fiscal Strategy. The Forward Estimates are based on wage increases being limited to 2 per cent per annum once the pay pause is lifted. Unions did not support the pay pause, so instead the Government reduced full-time equivalent (FTE) employees by 766 between 30 June 2014 and 31 March 2015 (Tasmanian Government, 2015a).

Table 3.3 Expenses, 2013-14 to 2017-18, 2014-15 Budget

	2013-2014 Outcome $m	2014-2015 Budget $m	2015-2016 Estimate $m	2016-2017 Estimate $m	2017-2018 Estimate $m	Annual Change %
Employee expenses	2,191	2,137.0	2,142.0	2,169.6	2,222.2	0.4
Superannuation	285	268.3	266.2	270.3	284.4	-0.1
Depreciation	273	287.0	295.5	295.8	298.2	2.2
Supplies and consumables	985	1,083.9	1,071.5	1,056.3	1,063.3	1.9
Nominal superannuation interest	252	283.1	291.6	299.1	306.1	5.0
Borrowing costs	12	11.0	10.6	10.3	10.1	-4.2
Grant expenses	1,048	1,148.3	1,104.7	1,128.7	1,166.4	2.7
Other expenses	29	30.5	29.4	25.1	24.7	-3.9
Total expenses	**5,075**	**5,249.3**	**5,211.4**	**5,255.3**	**5,375.4**	**1.4**

Source: Tasmanian Government (2014a); DTFT (2014c)

Table 3.4 Expenses, 2014-15 to 2018-19, 2015-16 Budget

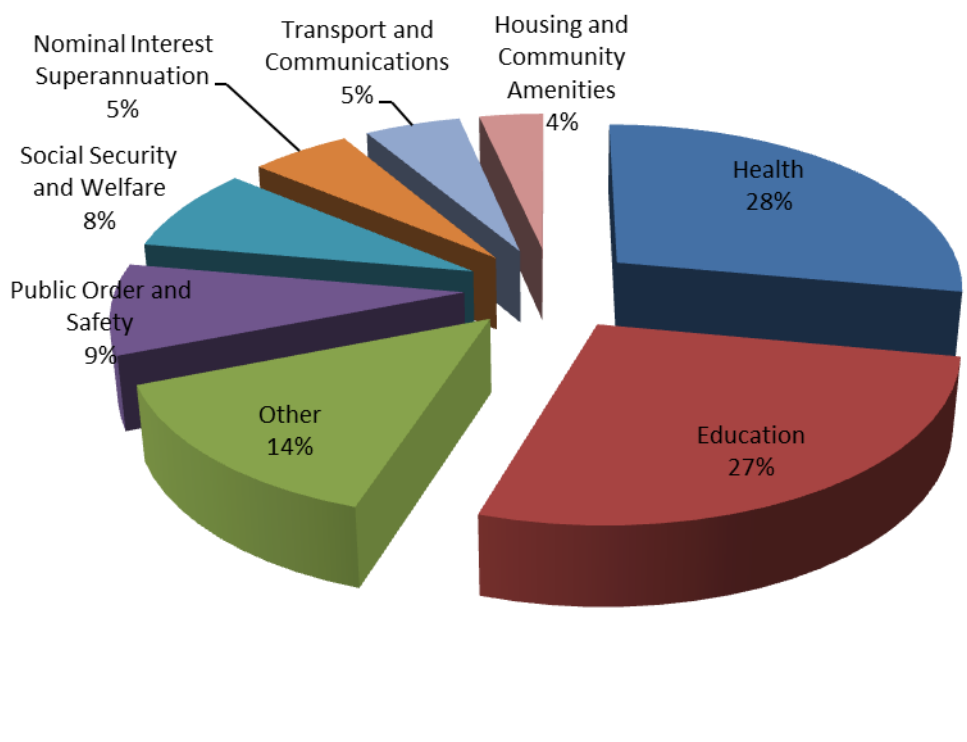
	2014-2015 Outcome (Est.) $m	2015-2016 Budget $m	2016-2017 Estimate $m	2017-2018 Estimate $m	2018-2019 Estimate $m	Annual Change %
Employee expenses	2,193.2	2,237.3	2,230.1	2,271.1	2,317.4	1.4
Superannuation	289.3	261.8	263.0	264.2	266.3	-2.0
Depreciation	287.3	285.3	294.1	312.5	319.6	2.7
Supplies and consumables	1,053.5	1,059.0	1,062.4	1,079.5	1,075.4	0.5
Nominal superannuation interest	268.2	285.7	292.7	299.1	304.7	3.2
Borrowing costs	10.9	10.8	10.4	10.1	9.7	-2.9
Grant expenses	1,126.8	1,200.6	1,125.1	1,141.6	1,183.6	1.2
Other expenses	37.6	25.8	21.2	20.1	18.4	-16.4
Total expenses	**5,266.8**	**5,366.3**	**5,299.0**	**5,398.3**	**5,495.2**	**1.1**

Source: Tasmanian Government (2015a)

Total expenses are expected to grow at a slower pace than revenue in both the 2014-15 and 2015-16 Budgets. The more favourable 2015-16 Budget has expenses only growing at 1.1 per cent per annum over the Forward Estimates period, while over the same period revenue is expected to grow by 2.8 per cent.

Figure 3.1 shows the Budget expenses by purpose for 2014-15, according to the Australian Bureau of Statistics (ABS) Government Purpose Classification (GPC). The activities of both the DPEM and the SFC come under the Public Order and Safety category, with total expenses being $459.5 million for the 2014-15 financial year making up 9 per cent of total expenditure.

Figure 3.1 Total expenses from transactions by purpose, 2014-15

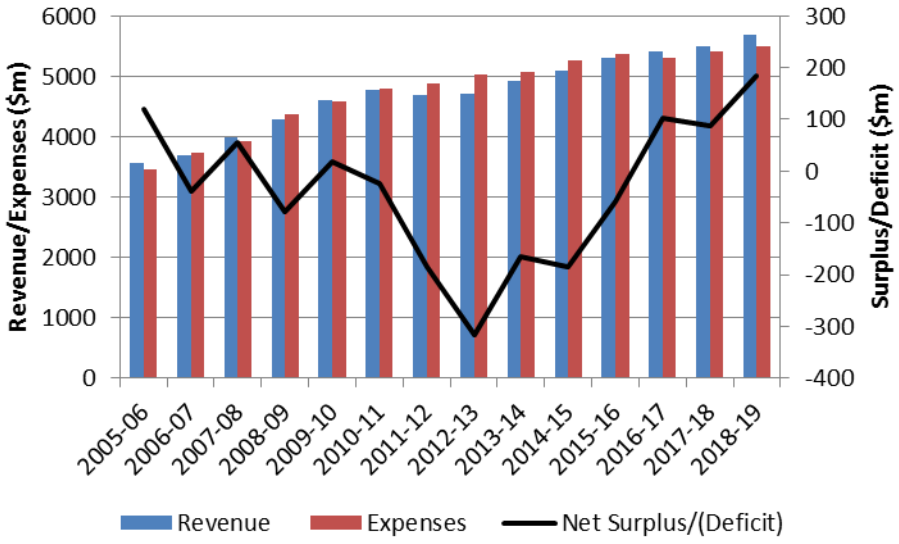


Source: Tasmanian Government (2014a)

Net Operating Balance

Figure 3.2 shows revenues, expenses and the Net Operating Balance (NOB) for the Tasmanian Government for the financial years 2005-06 to 2018-19. The amounts for 2005-06 to 2013-14 are actual realised amounts taken from the Treasurer's Annual Financial Reports; the 2014-15 amount is the expected outcome as reported in the 2015-16 Budget and the others are the Budget and Forward Estimates taken from the 2015-16 Budget.

Figure 3.2 Revenue, Expenses and Net Operating Balance



Source: Tasmanian Government (2015a); Treasurer's Annual Financial Report (various years)

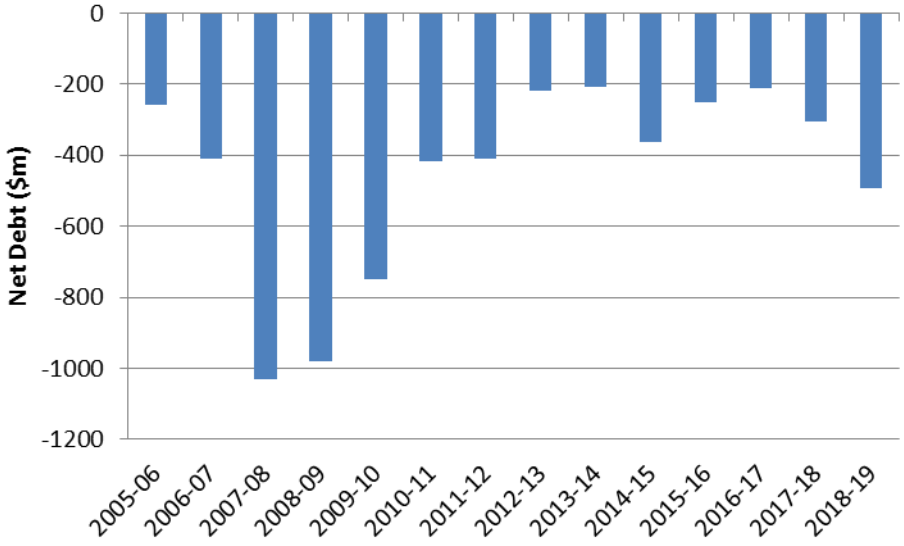
The NOB alternated between small surpluses and deficits between 2005-06 and 2010-11. In 2011-12 revenue actually decreased compared to the previous year, while expenses continued rising causing a large deficit ($186 million) and a small increase in revenue the following year wasn't enough to prevent an even larger deficit ($317 million). 2013-14 and 2014-15 saw larger growth in revenue and smaller increases in expenses to reduce the deficit back to similar levels to 2011-12.

The projected revenues, expenses and NOB, particularly for Forward Estimates, must be treated with caution, as actual figures rarely meet expectation. In 2011-12 for example, there was an expected NOB deficit of $113.8 million for that financial year, which blew out to a deficit of $186 million. However the forward estimate for just the next year (2012-13) was a surplus of $48.4 million. While this was revised to a deficit of $283.0 million by the time the 2012-13 Budget was delivered, the fact an actual deficit of $317 million was the result for the year, shows the difficulty in estimating forward estimates. The 2013-14 Budget overestimated the NOB deficit by $102 million and, similarly, the expected outcome for the 2014-15 NOB given in the 2015-16 Budget, shows a smaller than expected deficit to the amount of $100 million. Both these latter results show the slight improvement in the economy both locally and throughout Australia.

Net Debt

Figure 3.3 presents Net Debt for the period 2005-06 to 2018-19, with the period 2005-06 to 2013-14 showing actual net debt, 2014-15 being the estimated outcome reported in the 2015-16 Budget and the 2015-16 to 2018-19 amounts being the Budget and Forward Estimates. Tasmania had a positive net debt for the period either side of the turn of the century. By 2004-05 net debt had become negative and has remained negative since. This is despite some large deficits in that time, particularly during the economic downturn following the GFC. Net debt was expected to return to positive in 2013-14, but the improving economy allowed net debt to remain negative. Similarly, the estimated outcome for 2014-15 has net debt coming in a lot lower than predicted in the 2014-15 Budget at negative $364 million.

Figure 3.3 Net Debt



Source: Tasmanian Government (2015a); Treasurer's Annual Financial Report (various years)

3.4 Budget savings

The 2014-15 Tasmanian Budget was developed in response to two reports that were published in the first half of the year outlining the deteriorating nature of the State's financial position. The first, the 2013-14 Revised Estimates report released in February 2014, outlined a major deterioration in the Budget and Forward Estimates due to changes to the economic environment, as detailed previously. As well as the revised Budget estimates the report also detailed a deterioration of the labour market, with the expected year-average unemployment rate of 6.75 per cent revised to 8 per cent, gross state product to be 12.5 per cent lower than expected, and population growth to be half of what was predicted. The second, the Analysis of Budget Risks, cited a further deterioration just two months later, primarily due to weaker GST revenue and mineral royalties revenue. This latter report stressed the need for the Government to take immediate action to address the unsustainable budget position. The actual outcome of the 2013-14 Budget was not as dire as predicted in these two reports.

The actual 2013-14 NOB was a deficit $102 million less than what was projected in the 2013-14 Budget. This was primarily a result of higher revenue in the form of grants from the Federal Government. Other revenue and expenses came in fairly close to the original Budget estimates. Net debt at the end of the 2013-14 financial year was $428 million less than expected. Gross State Product was sluggish, with annual growth for 2013-14 being just 1.2 per cent.

In the 2014-15 Budget, the Government responded to the two reports by undertaking a combination of budget savings and revenue increasing strategies. These included:

- $563.4 million in Government and Agency savings;
- 12-month pay pause followed by limited wage growth; and
- Improved returns from Government Business Enterprises and State-owned Companies.

The Government and Agency savings were focussed on two broad designs. The first was the reduction in funding, abolition of service, amalgamation of agencies and targeted efficiency for Government agencies announced in the lead up to the 2014 election. This included abolishing the Climate Change Council, savings from tearing up the Forestry Deal and amalgamating agencies to create the Department of State Growth. The second was a detailed review of agency expenditures aimed at identifying savings over and above the ones identified previously.

The pay pause was designed to pause public sector wages for 12 months, including salary increases and salary progression increments. After the cessation of the pay pause, increases would then be limited to two per cent per annum. This future indexation of wages will be reviewed and considered under the economic and financial conditions at the time.

Table 3.5 shows the projected savings over the Budget and Forward Estimates period by agency. The figures include the impact of the 12-month pay pause. The largest funding cuts will be to the Finance-General Division (32.5 per cent of total savings in 2014-15) which administers some of the targeted Government savings.

The DPEM was earmarked for a $7.5 million cut in 2014-15, which was 4.9 per cent of total savings. Among the savings strategies identified for the DPEM were the following:

- The State Emergency Service to report through the Chief Fire Officer to achieve economies of scale and eliminate duplication of services;
- Reviewing the management of the Department's vehicle fleet;
- Reviewing the Department's accommodation arrangements;

Table 3.5 Expenditure savings by agency, 2014-15 to 2017-18

	2014-15 Budget $m	2015-16 Forward Estimate $m	2016-17 Forward Estimate $m	2017-18 Forward Estimate $m	Total savings $m	Share of savings 2014-15 %
Education	21.6	38.0	44.3	44.5	148.4	14.2
Finance-General	49.3	50.3	46.8	24.8	171.2	32.5
Health and Human Services	18.9	25.5	26.4	28.3	99.1	12.4
Tasmanian Health Organisations	21.8	28.6	30.9	30.0	111.3	14.4
Justice	2.7	5.8	5.9	5.9	20.3	1.8
Ministerial and Parliamentary Support	1.6	1.8	1.8	1.8	7.1	1.1
Police and Emergency Management	7.5	11.2	11.7	11.9	42.2	4.9
Premier and Cabinet	4.6	4.5	4.6	4.7	18.3	3.0
Primary Industries, Parks, Water and Environment	7.7	10.6	10.7	10.7	39.7	5.1
State Growth	13.1	17.7	18.8	19.4	68.9	8.6
Treasury and Finance	1.1	1.8	1.8	1.8	6.5	0.7
Other	1.9	3.0	3.2	3.2	11.4	1.3
Total	**151.9**	**198.7**	**207.0**	**187.0**	**744.6**	**100.0**

Source: Tasmanian Government (2014a)

- Reviewing support service arrangements and business processes with a view to creating structural savings; and
- The implementation of the Government's policy to constrain public sector wages through a 12-month pay pause.

In the 2015-16 Budget the Government made a commitment to implement no new additional structural savings.

3.5 Expected outcome of the 2014-15 Budget

As part of the Budget the Government reports on the estimated outcome of the previous year's Budget. Table 3.6 shows the variation from the Budget to the expected outcome for revenue and expenses.

The largest expected increase in revenue is in grants from the Federal Government, which are on course to exceed expectations by $65.6 million, over half of which is due to an increase in GST revenue to Tasmania. The increase in taxation is mainly due to increases from conveyances due to higher activity in the property market. This increase is slightly offset by a decrease in payroll tax receipts, despite employment levels in Tasmania rising (suggesting growth in employment in businesses that do not pay payroll tax). Dividend, tax and rate equivalent income increases are largely due to Tasmanian Networks Pty Ltd, Aurora Energy Pty Ltd and Forestry Tasmania, slightly offset by a reduction in Hydro Tasmania. Nominal superannuation interest expenses are expected to be $14.9 million less than forecast in the Budget. Further, policy decisions during the year mean expenses are expected to come in $7.4 million less than budgeted.

Table 3.6 2014-15 Estimated outcome variation from 2014-15 Budget

Revenue		Expenses	
Adjustment	**Difference ($m)**	**Adjustment**	**Difference ($m)**
Grants	65.6	Policy Decisions	(7.4)
Taxation	15.2	Depreciation	0.2
Dividend, Tax and Rate Equivalent Income	26.2	Nominal Superannuation Interest Expense	(14.9)
Interest Income	2.3	Borrowing Costs	(0.1)
Agency Revenue	7.6	Agency Expenditure	39.6
Total	**116.9**	**Total**	**17.5**

Source: Tasmanian Government (2014a)

Agency revenue and expenditure are both expected to exceed their Budget forecasts for 2014-15. The main increase in agency revenue is for the Tasmanian Health Service ($6.2 million), which has revised its estimates of funding primarily from non-government organisations. Tasmanian Health Service is also responsible for a large proportion of the increase in agency expenditure ($31.3 million) mainly due to over-budget expenditure. Education also contributes significantly to the positive variation in agency expenditure.

Cook *et al.* (2012) discuss the impact of fiscal austerity measures on Budget outcomes in detail. They point out the effect the automatic stabilisers have on the actual Budget balance, specifically the inverse relationship between tax revenue and welfare payments. When the economy is weak tax revenue falls and welfare payments rise, moving the Budget towards deficit, and vice versa when the economy is strong. The effect of these is that any projected Budget outcome will vary depending on the performance of the economy and thus the automatic stabilisers. Indeed growth in household spending, retail trade, building approvals and finance commitments, business confidence and private investment through the early part of 2014, along with growth in employment, meant the perceived problems of the 2013-14 Budget outcomes did not eventuate to the extent predicted. This appears to have had a flow on effect for the 2014-15 financial year.

The DPEM has a higher estimated outcome for 2014-15 than forecast in the Budget for both revenue ($3.7 million) and expenses ($2.9 million). In explaining the increase in revenue Treasury cites:

> The increase in revenue for 2014-15 for the Department of Police and Emergency Management primarily reflects the costs associated with the State Emergency Service (SES). Despite the revised reporting arrangements for the SES, which has transferred to the State Fire Commission, the Department continued to incur the costs relating to the SES in 2014-15 during the transition to the new reporting arrangements. The Department invoiced the Tasmania Fire Service for the SES costs it incurred in 2014-15 (Tasmanian Government, 2015a: 72)

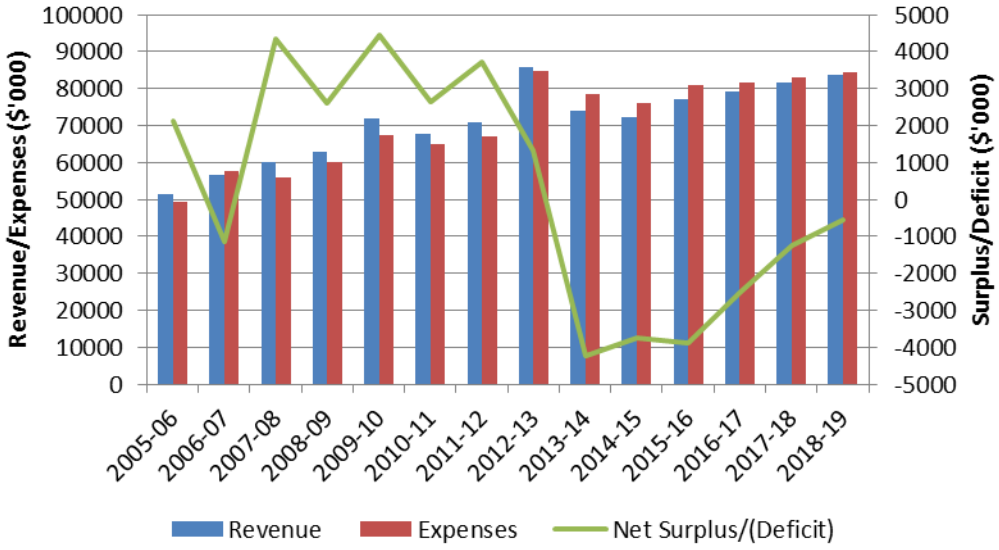
No explanation is provided for the increase in expenditure. The State Fire Commission has a higher estimated revenue outcome for 2014-15 of $200,000 and a higher estimated expense outcome of $3.6 million. We will return to look at this in the next section.

4. The State Fire Commission Budget 2014-15 and 2015-16

This section details the implications for the State Fire Commission Budget and by extension the Tasmanian Fire Service of the 2014-15 and 2015-16 Tasmanian Government Budgets. Each year the SFC submits a budget to the Minister for approval, which is then submitted as part of the Tasmanian Budget. The 2014-15 SFC Budget was accepted by the Minister on 19 May 2014 as part of the State Fire Commission Corporate Plan for the Financial Years 2014-15 to 2018-19 (SFC, 2014a). The SFC Budget presented in the Tasmanian Budget was different to that accepted by the Minister.

Figure 4.1 shows the revenue, expenses and net operating balance for the SFC from 2005-06 to 2018-19. The period from 2005-06 to 2013-14 show actual revenue and expenses as per the SFC Annual Reports, while the 2014-15 amounts are those in the 2014-15 Budget, the 2015-16 amounts are those in the 2015-16 Budget and the 2016-17 to 2018-19 period are the Forward Estimates from the 2015-16 Budget. The 2013-14 financial year saw the first deficit for the SFC since 2006-07. Deficits are projected to continue through the current Forward Estimates period.

Figure 4.1 SFC revenue, expenses and net operating balance



Source: SFC Annual Reports (various years); Tasmanian Government (2015b)

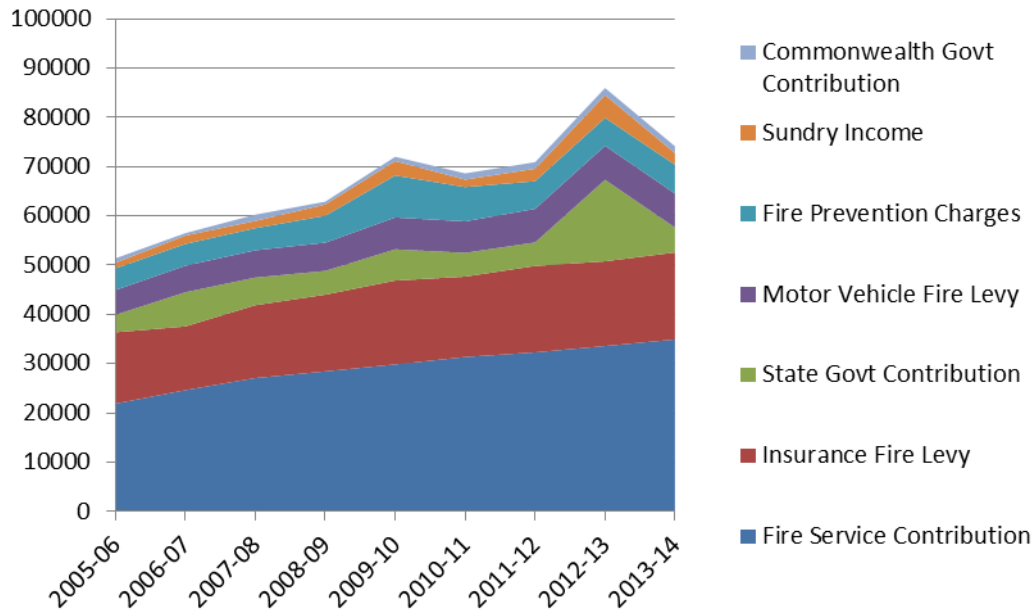
4.1 Revenue

We saw in Section 2 the revenue sources of the SFC include the following:

- Fire Service Contributions received from Local Councils through rates they levy on properties;
- Insurance Fire Levy contributions received from insurance companies;
- State Government Contribution;
- Motor Vehicle Fire Levy applied to all registered vehicles;
- Fire Prevention Charges earned through the sale, inspection and maintenance of fire safety equipment, training or other fire prevention services;
- Sundry Income including reimbursements from FT and PWS for bushfire fighting, contributions from other agencies for staff services and shared facilities and reimbursements for interstate and overseas deployments; and
- Commonwealth Government Contribution.

Figure 4.2 shows the growth of revenue between 2005-06 and 2013-14. Total revenue increased from $51.4 million in 2005-06 to $74.1 million in 2013-14, representing an average annual increase of 4.7 per cent. The large increase in revenue in 2012-13 was a result of the severe bushfire season, for which the SFC received additional State Government and PWS and FT reimbursements to cover these additional costs.

Figure 4.2 SFC sources of revenue



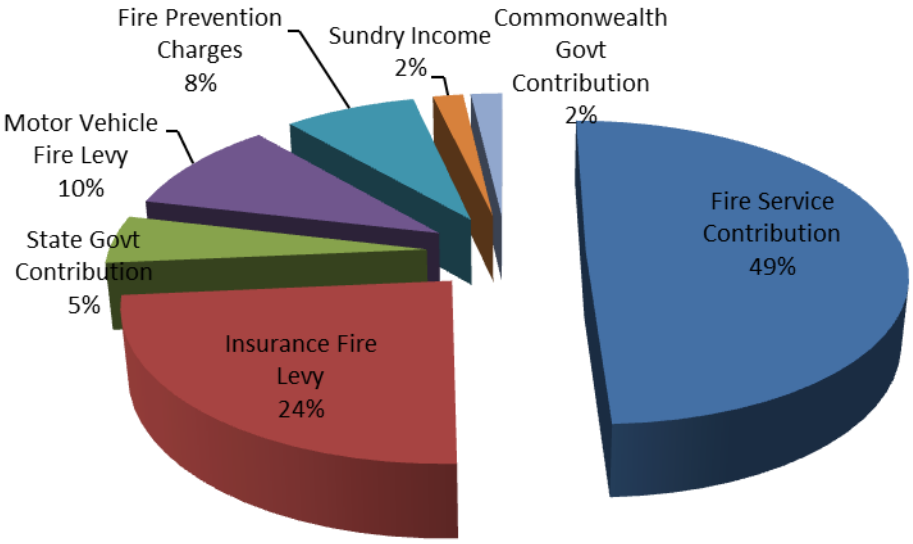
Source: SFC Annual reports (various years)

The proportion of revenue covered by the Fire Service Contribution has risen over that period from 42.6 per cent in 2005-06 to 47.1 per cent in 2013-14; representing an annual increase of 6 per cent per annum. This has mainly been at the cost of the Insurance Fire Levy which has reduced from 28.2 per cent in 2005-06 to 23.8 per cent in 2013-14, giving an average annual increase of 2.5 per cent. The State Government Contribution has risen on average 4.5 per cent per annum from 2005-06 to 2013-14, yet has been varied in the proportion of yearly revenue it comprises due to the variability of reimbursement costs for bushfire fighting. For example, in 2005-06 the State Government contribution was 6.9 per cent of total revenue, while in 2006-07 it comprised 12.3 per cent and in 2012-13 19.2 per cent. As presented in Section 2, the *Fire Service Act 1979* makes provisions for the Treasurer to determine the appropriate amount allocated to the SFC towards the operating costs of the Commission.

The SFC Budget for 2014-15 estimated revenue to be $74.541 million (SFC, 2014a), made up of 49.4 per cent of Fire Service Contribution as shown in Figure 4.3.

As mentioned previously the Budget for the SFC that appeared in the 2014-15 Tasmanian Government Budget differed to that submitted by the SFC and accepted by the Minister. The difference was in the total amount of grants. While the breakdown of revenue sources in the two Budgets differ, in the Tasmanian Government Budget the combined State and Federal Government grants to the SFC totalled just $3.083 million, as opposed to $5.179 million in the SFC Budget. It is unclear if this is a reduction in grants from the State Government or the Federal Government. This takes the proportion of total revenue coming from grants from 6.9 per cent to 4.3 per cent.

Figure 4.3 Revenue projections for 2014-15

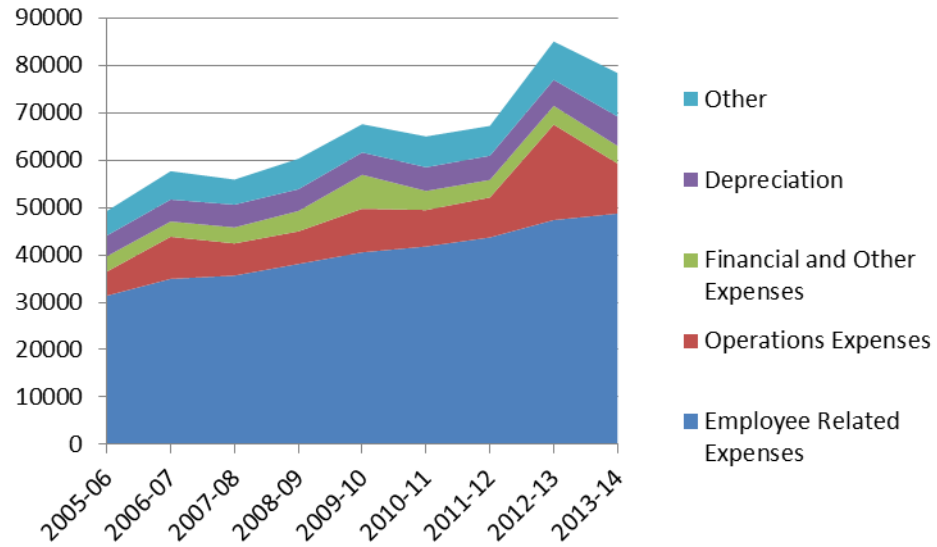


Source: SFC (2014b)

4.2 Expenditure

The composition of expenses for the period 2005-06 to 2013-14 is shown in Figure 4.4. Total expenses rose from $49.3 million in 2005-06 to $78.4 million in 2013-14, representing an average annual increase of 6.0 per cent per annum. Hence over the same period expenses have grown faster than revenue.

Figure 4.4 SFC expenses



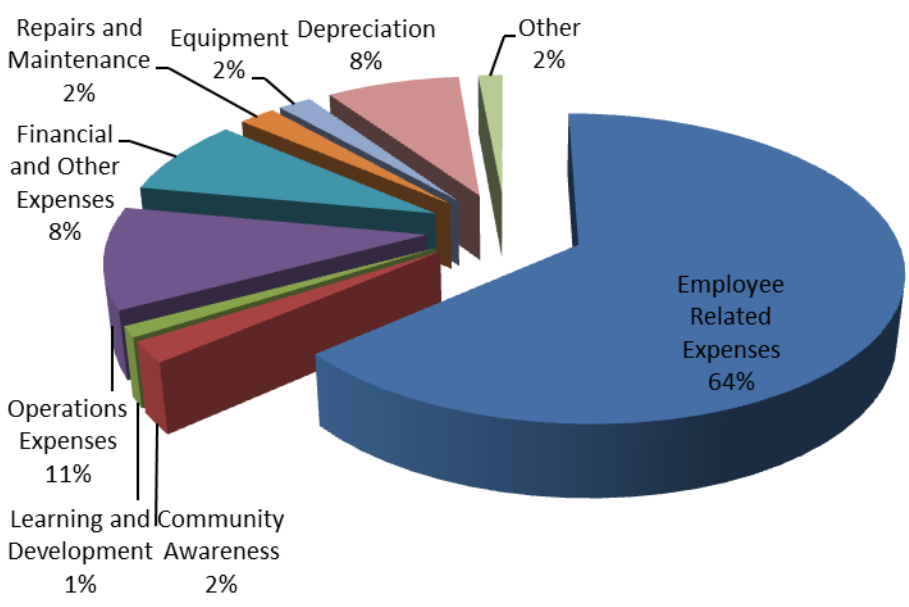
Source: SFC Annual Reports (various years)

Operations expenses have risen by the greatest percentage over the period analysed, at an average of 9.6 per cent per annum. Operations expenses depend very much on the severity of the bushfire season, as can be seen in 2012-13 for example, where operations account for 23.7 per cent of total expenditure, while in 2013-14 it accounted for just 13.5 per cent of total

expenses. Employee related expenses have risen by 5.6 per cent over the period and in 2013-14 comprised 62.2 per cent of total expenses.

The SFC Budget for 2014-15 estimated expenses to be $78.298 million (SFC, 2014a), with the greatest expense being employee related expenses, comprising 64 per cent of total expenditure, as shown in Figure 4.5.

Figure 4.5 SFC expenses, 2014-15



Source: SFC (2014a)

As we saw with revenue, expenses in the SFC Budget published in the SFC Corporate Plan and approved by the Minister (Figure 4.5) are also slightly different to the SFC Budget published in the 2014-15 Tasmanian Government Budget. The shortfall is the same amount as the shortfall in revenue ($2.096 million). Unfortunately, due to the different breakdown in expenses between the two Budgets it is not possible to determine where in the SFC Budget the changes were made.

4.3 Effect of 2014-15 Budget savings and commitments on TFS

State Emergency Service

As outlined in the previous section the Tasmanian Government implemented a range of savings strategies in the 2014-15 Budget. Among these was the altering of management arrangements within the DPEM. Specifically, the SES now reports through the TFS. In citing the reasons for this the Government says:

> Management arrangements within the Department of Police and Emergency Management (DPEM) are being revised and the State Emergency Service (SES) will report through the Tasmania Fire Service to better reflect the close alignment of these agencies. The SES and the Commission have many synergies; they both have a large pool of dedicated volunteers, work together on emergency incidents and many of their premises are co-located.
>
> Under the new arrangement, the Director of the SES will report through the Chief Fire Officer to the Secretary of DPEM (Commissioner of Police). Previously, the Director reported directly to the Secretary.

> There will be no change to the operational role of either agency or the way employees and volunteers respond to emergencies. (Tasmanian Government, 2014c: 27.4)

In 2013-14 $2.446 million in revenue was appropriated to the SES through the DPEM. Activities undertaken as part of the SES output group included emergency risk management and disaster mitigation, preparedness and responsiveness to emergency events, and the development and training of volunteers (Tasmanian Government, 2013: 9.9).

When the change of reporting arrangements was made in 2014-15, there was no accompanying transfer of funds from the DPEM to TFS to cover the costs of reporting for the SES. The SES line entry in the 2014-15 Budget equivalent to the $2.446 million in 2013-14 was zero, with a footnote explaining: "The decrease in State Emergency Service reflects the transfer of reporting arrangements for the State Emergency Service to the Tasmania Fire Service" (Tasmanian Government, 2014b: 7.15). It has since been reported that $400,000 has been transferred from DPEM to TFS (Billings, 2014), well short of the $2.446 million allocated to the SES in 2013-14.

There is little mention of the SES reporting costs in the 2014-15 Tasmanian Budget, aside from the footnote above. There is no corresponding line entry in the SFC Budget. It appears the DPEM bore the costs of the SES for the 2014-15 financial year during the transition, however "the Department (DPEM) invoiced the Tasmania Fire Service for the SES costs it incurred in 2014-15" (Tasmanian Government, 2015a: 72). There is more recognition in the subsequent 2015-16 Budget, where the new reporting arrangements continue. In the 2015-16 Budget listed among the Key Deliverables of the SFC is a line entry State Emergency Service, with the statement "the Commission (SFC) provides ongoing funding for the SES of $2.5 million in 2015-16 increasing to $2.7 million in 2018-19" (Tasmanian Government, 2015b: 99).

Table 4.1 presents the funding for the SES line entries over the three subsequent Budgets for the Budget year and Forward Estimates period. As can be seen the amount budgeted for in 2015-16 (under the SFC) is the same as the Forward Estimate for 2015-16 that was in the 2013-14 Budget when the SES was still under the DPEM.

Table 4.1 Money appropriated to SES over successive Budgets

	2013-14 ($'000)	**2014-15 ($'000)**	**2015-16 ($'000)**	**2016-17 ($'000)**	**2017-18 ($'000)**	**2018-19 ($'000)**
2013-14 Budget – DPEM Revenue Appropriated by Output	2446	2494	2538	2584		
2014-15 Budget – DPEM Revenue Appropriated by Output		…	…	…	…	
2015-16 Budget – SFC Key Deliverable			2538	2596	2653	2706

Source: Tasmanian Government (2013; 2014b; 2015b)

It is questionable whether there is provision in the *Fire Service Act 1979* for the SFC to direct funds to the SES. In the Act the fire service contribution is defined as being "the amount that a local council may collect from its ratepayers to make up the contribution that the local council is required to make towards the operating costs of brigades." The Act makes provision for finances of the SFC in Part VI, section 74(2), which refers specifically to the operation of a brigade and the costs incurred by the SFC in servicing the brigade. These include:

- salaries, wages allowances and expenses to the members of a brigade;
- buying and maintaining equipment, land and buildings for use by the brigade;

- making principal and interest payments on money borrowed by the SFC for the purpose of purchasing equipment, land or buildings for use by the brigade;
- paying workers compensation premiums for members of the brigade and rates and charges in respect of land occupied by the brigade;
- paying expenses incurred by members of the brigade in the exercise of their functions; and
- infrastructure costs of the TFS.

There is provision for expenditure outside the Act in section 107: "The Chief Officer may, in any financial year, expend out of the funds of the Commission any sum of money for any purpose approved by the Minister, notwithstanding that that expenditure may not be authorized under any other provision of this Act." This was included to originally allow payments of no more than $1,000, but in the *Fire Service Reform Act 1995*, s. 88 amends Section 107 such that "Section 107 of the Principal Act is amended as follows:- … (b) by omitting ', not exceeding $1 000 in the aggregate,'." It appears it is now being used to allow payments of more than $2 million for non-fire related activities.

A full legal examination of the Act is beyond the scope of this project.

It is possible the financial statements for both DPEM and SFC may be subject to future amendment as the transition of the administrative arrangements for the SES are expected to be finalised in 2015-16 (Tasmanian Government, 2015b: 101).

Fuel Reduction Burns Program and Corporate Services Review

The 2014-15 Tasmanian Budget has much funding and allowances for commitments made in the lead-up to the 2014 Tasmanian election. Among these was a Fuel Reduction Burns program aimed at mitigating the risks to people and property posed by bushfire. It is a risk-based program of burns where fuel will be burnt in the areas that pose the greatest risk to the community, whether they are owned by the public or private land owners. The program has a target of 17,000 hectares of treatable vegetation burning.

The program is being funded through the DPIPWE, which will receive $28.5 million over four years, starting with $4 million in 2014-15 and $6.5 million in 2015-16. Despite the funding going to DPIPWE the program is being overseen by the Fuel Reduction Unit within the TFS. The 2014-15 Tasmanian Budget included a contribution to the Fuel Reduction program to come from the State Fire Management Council (SFMC), funded out of the SFC Budget, for an amount of $848,000, listed as a Major Initiative (Tasmanian Government, 2014c).

The 2015-16 SFC Corporate Plan mentions the Fuel Reduction Unit (FRU) building upon the support staffing arrangements of the SFMC. It says, while the FRU forms part of TFS, funding is predominantly provided outside of the Corporate Plan through DPIPWE. The number of fuel reduction burns is an indicator of the Strategic Goal 2 for 2015-16, ensuring the TFS has a concerted interest in the program. The 2015-16 Tasmanian Budget lists as a Key Deliverable $770,000 from SFMC, which is a contribution from the SFC, "including $398,000 for the employment of 3.4 Full Time Equivalents to support the Fuel Reduction Unit." (Tasmanian Government, 2015b: 100). Some reimbursement from DPIPWE to SFC occurs for the employment of two regional planners (Tasmanian Government, 2015b: 101).

In addition the review into corporate services (WLF, 2014) has seen the amalgamation of corporate services across the emergency service agencies. The SFC bore costs in 2014-15 for the review and the implementation of the review from its existing Budget.

Budget position of SFC

As we saw in Section 1, the Fire Service Contribution (FSC) is the only revenue source the SFC has direct control over. The 2014-15 SFC Budget implemented a 5.5 per cent increase in the FSC and projected a 4 per cent increase in 2015-16. The actual 2015-16 Budget also implemented a 5.5 per cent increase in the FSC. This is despite the plan by the previous Government to reduce the indexation of the FSC from 5 per cent to 3 per cent in 2011-12 (Cook *et al.*, 2012). Despite this the SFC will still run a large net operating deficit for 2015-16. The 2015-16 SFC Budget makes provision for the ongoing funding of SES of $2.538 million in 2015-16 increasing to $2.706 million in 2018-19.

The SFC Budget presented in the 2015-16 Corporate Plan is shown in Table 4.2. This shows the actual 2013-14 outcome, the 2014-15 Base and Revised Budgets and the Budget for 2015-16 and Forward Estimate for 2016-17. As can be seen a net operating deficit is projected for the 2014-15, 2015-16 and 2016-17 financial years. The Corporate Plan gives Forward Estimates for 2017-18 and 2018-19 also and net operating deficits are also projected for both those years. It must be noted the Base Budget for 2014-15 is the Budget published in the 2014-15 SFC Corporate Plan, which differed from the SFC Budget published in the 2014-15 Tasmanian Government Budget.

The revised 2014-15 Budget shows an increase in deficit of more than $2 million from its base Budget, mostly from an increase in Operations. It is assumed this increase in Operations expenses is the cost of funding the SES and the associated costs with the Fuel Reduction Burns program and the amalgamation of corporate services across the emergency services. These extra costs to the SFC mean it is projecting a negative net operating balance for all financial years across the current Forward Estimates period to 2018-19, reducing each year.

The last two lines of Table 4.2 give some idea of the effect of the SFC funding the SES and the associated costs with the Fuel Reduction Burns program and the amalgamation of corporate services across the Emergency Services. The SFC are requiring borrowings of $1.5 million in 2015-16 to meet their obligations, which will require servicing into the future. Previous Corporate Plans have included a debt reduction strategy (not included in the 2015-16 Corporate Plan) that have included the stated aim that “where opportunities arise the Commission is committed to reducing its debt” (SFC, 2014a: 17). The SFC are required to borrow in 2015-16 as they would have a negative cash balance at the end of the financial period otherwise. Further borrowings are projected into the forward estimates period as, even with the $1.5 million loan in 2015-16, a negative cash balance is projected at the end of each financial year from 2016-17 to 2018-19. Being forced to borrow an additional $1.5 million has meant interest expenses for the SFC increase by $90,000 on the previous year’s projection.

The SFC Budget was accepted by the Minister in early May, 2015. The Tasmanian Government Budget for 2015-16 was delivered in late May 2015 and the position of the SFC Budget for 2014-15 reported in the Tasmanian Government Budget had deteriorated from the revised budget below. In the Policy and Parameter Statement, the estimated outcome for 2014-15 for the SFC had an increase of $200,000 in revenue and an increase of $3.6 million in expenditure. Hence, the Base Budget estimated a deficit of $3.757 million and the Revised Budget a deficit of $5.83 million, but in the latest estimate, the SFC are facing a deficit of $7.1 million for the 2014-15 financial year.

Table 4.2 SFC Budget position, 2015-16

	Actual 2013-14 $'000	Base Budget 2014-15 $'000	Revised Budget 2014-15 $'000	Budget 2015-16 $'000	Forward Estimate 2016-17 $'000
Revenue					
Fire Service Contribution	34,924	36,837	36,837	38,863	40,418
Insurance Fire Levy	17,658	18,000	18,000	18,200	18,400
State Govt Grant	5,046	3,802	3,802	3,802	3,802
Motor Vehicle Fire Levy	6,902	7,388	7,388	7,626	7,626
Fire Prevention Charges	5,855	5,807	5,888	6,035	6,186
Sundry Income/Interest	2,351	1,330	1,390	1,463	1,499
Federal Govt Grant	1,399	1,377	1,155	1,187	1,219
Total Revenue	**74,135**	**74,541**	**74,460**	**77,176**	**79,149**
Expenses					
Employee Expenses	48,717	49,909	50,252	50,966	51,773
Operations	10,557	8,501	10,608	10,336	10,416
Financial Expenses	5,503	6,464	6,188	6,188	6,188
Depreciation	6,208	6,303	6,792	6,937	6,687
Other Expenses	7,378	7,121	6,450	6,643	6,621
Total Expenses	**78,363**	**78,298**	**80,290**	**81,070**	**81,685**
Net Surplus/(Deficit)	-4,228	-3,757	-5,830	-3,894	-2,536
Interest Bearing Liabilities (Current and Non Current)	3,330	3,330	3,330	4,830	4,830
Cash at end of Financial Period	6,180	714	1,492	505	-273

Source: SFC (2015)

4.4 Capital Expenditure Program

The SFC Corporate Plan makes allowance for capital expenditure in its Budgets each year. The preservation of the capital works program is seen as vital to the continued success of the TFS:

> Without sufficient funding the Commission will not be able to continue its current fire appliance replacement program and it will be unable to replace, in an acceptable period of time, a significant number of fire appliances that either do not provide the necessary crew protection or are costly and difficult to maintain (SFC, 2015: 6).

The capital expenditure program is funded by the revenue SFC generates through its various revenue streams. As the SFC is not required to distribute surpluses to government, any surpluses from the net operating balance are able to be used to assist with the capital development program. In the current scenario, where the net operating balance is projected to

be negative, the capital expenditure program is cut to make savings so money can be spent elsewhere.

The primary capital works for 2014-15 and 2015-16 focussed on replacing firefighting trucks across brigades, replacing ageing communications systems infrastructure and upgrading land and buildings. The Fire Fighting Truck Replacement Program is aimed at upgrading the tanker fleet as well as purchasing two new pumpers and the refurbishment of aerial appliances. Expenditure on this was projected to be $19 million over five years from 2014-15. However, in 2015-16 this was revised downward to $13.3 million over the next four years. In the Debt Reduction Strategy for 2014-15 the SFC point out the importance of their appliance replacement program by saying "in seeking to reduce its debt the Commission has been mindful not to compromise its fire appliance replacement program" (SFC, 2014a: 17).

Land and Buildings capital expenditure will also fall from the amount projected in 2014-15. The SFC cites "increasing budgetary pressures will impact upon the capital buildings program." (SFC, 2015: 17). $5.7 million was allocated for the five years from 2014-15, but despite only $400,000 being spent in 2014-15, the projection for 2015-16 was just $4.1 million over the next four years.

Table 4.3 shows the proposed capital expenditure program in consecutive SFC Budgets for 2014-15 and 2015-16. The 2014-15 Budget projected a rise in capital expenditure of $200,000 for both 2015-16 and 2016-17. However, the capital expenditure proposed in the 2015-16 Budget was $1.5 million less than that for 2015-16 and $100,000 less for 2016-17. In spite of the cuts to the capital expenditure program, it is cited as the reason for the borrowing by the SFC in 2015-16: "the increase in Interest bearing liabilities in 2016 reflects the funding of the Commission's capital expenditure program" (Tasmanian Government, 2015b: 102).

Table 4.3 SFC Planned capital expenditure

			2014-15 Budget		**2015-16 Budget**	
	2014-15 Original Budget $'000	2014-15 Revised Budget $'000	2015-16 Forward Estimate $'000	2016-17 Forward Estimate $'000	2015-16 Budget $'000	2016-17 Forward Estimate $'000
Land and Buildings	1,000	400	1,200	1,200	600	1,200
Motor Vehicles and Appliances	4,000	4,620	4,000	4,000	3,200	3,900
Plant and Equipment	930	930	930	930	830	930
Total	**5,930**	**5,950**	**6,130**	**6,130**	**4,630**	**6,030**

Source: SFC (2014a; 2015)

4.5 Summary

The transfer of reporting arrangements for the SES, where they now report through the TFS, has had a large effect on the SFC Budget immediately and into the future. Effectively the transfer has meant the SES is now financially supported by the SFC. Despite the transfer of the SES to report through the SFC, very little money has accompanied the transfer to cover the costs of the SES. One source says only $400,000 has been transferred, of an estimated $2.5 million in ongoing SES yearly costs.

In addition, the new Government elected in March 2014, took with it to the polls a promise of increasing fuel reduction burns to reduce the risk of bushfire across the state. The implementation of the Fuel Reduction Burns program, managed by the Fuel Reduction Unit within the TFS, has also eaten into the SFC Budget with over $1.6 million going towards it

over the first two years of its operation. Further, a review of corporate services across the Emergency Services has seen all corporate services amalgamated, which has caused further strain on the Budget in the short term.

A conservative estimate puts the extra costs to the SFC of these changes at well over $2.5 million for the 2014-15 financial year. These extra costs are due to continue until at least 2017-18 while the Fuel Reduction Burns program remains in place, after which the SFC will still be required to fund the SES, which at the time is projected to be costing the SFC $2.7 million.

There are two main consequences of this increased demand on SFC funds, without sufficient reimbursement to meet the extra demands. The first is that the SFC is forced to make spending cuts that it had not budgeted for. Cuts to repairs and maintenance, equipment under $2,000 and financial and other expenses have been made from projected levels. In addition, the capital expenditure program in the current year and into the future has seen large cuts, especially to the Fire Fighting Truck Replacement Program and the upgrading of Land and Buildings.

The second consequence of the extra demand on SFC funds is the inability of revenue to meet expenses and the inevitability of the SFC to begin a spiral of operating deficits. We have seen that the cash position was expected to be very close to zero at the end of 2014-15. The latest estimate in the 2015-16 Budget has cash at hand at less than $1 million at the end of 2014-15. This has forced the SFC to borrow $1.5 million in 2015-16. Given the deteriorating position of the operating balance in the interim, it is expected that more will have to be borrowed in the current financial year. Further, cash at hand is expected to be below zero for each of the years in the Forward Estimates, implying further borrowing will be required. Of course, servicing a loan is expenditure that is not used elsewhere and will place further strain on the Budget going forward, as well as the need to reduce the debt.

The extra burdens on the SFC Budget and, by extension, the operation of the TFS have potential negative outcomes for the people of Tasmania. As we will see in the next section Tasmania already has comparatively worse outcomes than the rest of Australia in terms of property damage and loss of life caused by fire. It is risky to place additional pressure on the service tasked with improving this situation.

5. How does Tasmania compare?

The major source of information on the performance of fire services in Australia is published in the annual Report on Government Services produced by the Productivity Commission for the Steering Committee for the Review of Government Service Provision (SCRGSP, various years). The objectives of the publication are set out in its Terms of Reference. These include publishing data on the equity, efficiency and cost effectiveness of government services, facilitating improved service delivery, efficiency and performance and accountability to governments and the public, publishing data on a robust set of performance indicators and highlighting improvements and innovations. The publication allows a comparison between the different states and territories across Australia on their government service performance. Despite there being some jurisdictional differences between the states and territories, in terms of data discrepancies and interpretation, it broadly enables interstate comparisons on a wide range of measures.

Once again we follow Cook *et al.* (2012) in providing an analysis of the risk factors related to fire, fire service resources and outcomes for Tasmania, compared to the other states and territories in Australia, as well as drawing on some international comparisons. The first section examines general demographic and socioeconomic information, comparing Tasmania to the rest of Australia in terms of the factors that increase the risk of death and injury in the population. The following section looks at the resources allocated to fire prevention and suppression across Australia, followed by an analysis of the performance of Tasmania compared to the other states and territories in Australia.

5.1 Demographic and socioeconomic information

People facing disadvantage are generally more vulnerable at all stages of a disaster. In a comprehensive study of fire fatalities in Australia, the Queensland Department of Emergency Services studied all 550 fire fatalities in structure fires in Australia between 1991 and 1996 (Department of Emergency Services, 1998: 9). They concluded the following groups are at greater risk than average of being involved in fatal fires:

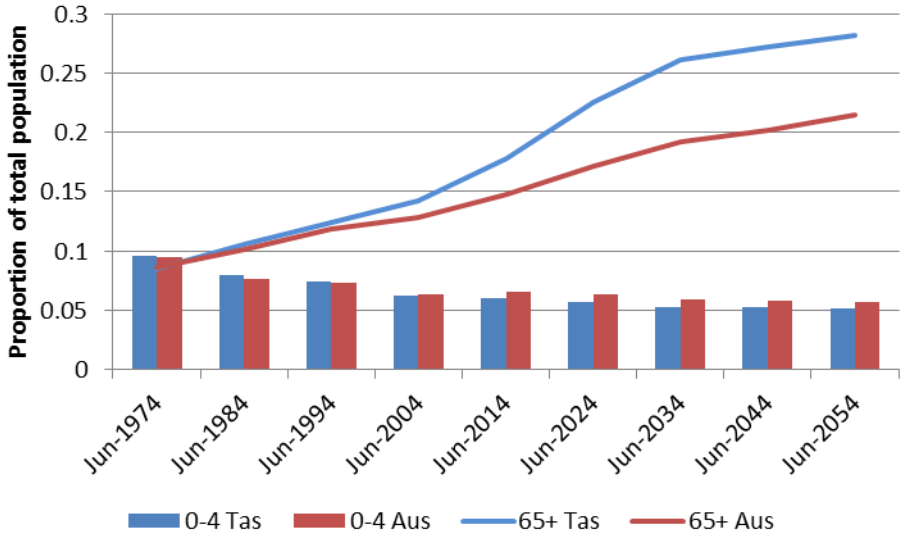
- Elderly people aged 65 years and older;
- Children aged between zero and four years;
- Adults affected by alcohol; and
- Adults not in the workforce.

The US Federal Emergency Agency (FEMA, 2013) focussed a Topical Fire Report on the risk to older adults of fire. Their report showed that people aged 65 years or older accounted for 35 per cent of fire deaths in the US in 2010, while only comprising 13 per cent of the population. Further, the relative risk of individuals aged 65 years or over dying in a fire was 2.7 times greater than that of the general population. The report goes on to highlight the concern of the ageing population, where it is estimated the older population will comprise 19 per cent of the total by 2030. Australia is on a similar trajectory, where older people will comprise a larger proportion of the total population.

Currently, Tasmania leads the country with the oldest population and is above the national average for the proportion of people above 65 years of age, as shown in Figure 5.1. The June 1974 to June 2014 figures are taken from the Estimated Resident Population, published by the ABS, while the future figures are taken from population projections (Series B). While historically, the proportion of people in the 65+ age group has been similar in Tasmania to the rest of Australia, this is expected to increase at a faster rate in Tasmania than for the rest

of Australia. In just under 20 years the proportion of people in Tasmania 65 years or over will be over 25 per cent, whereas in Australia it will remain less than 20 per cent.

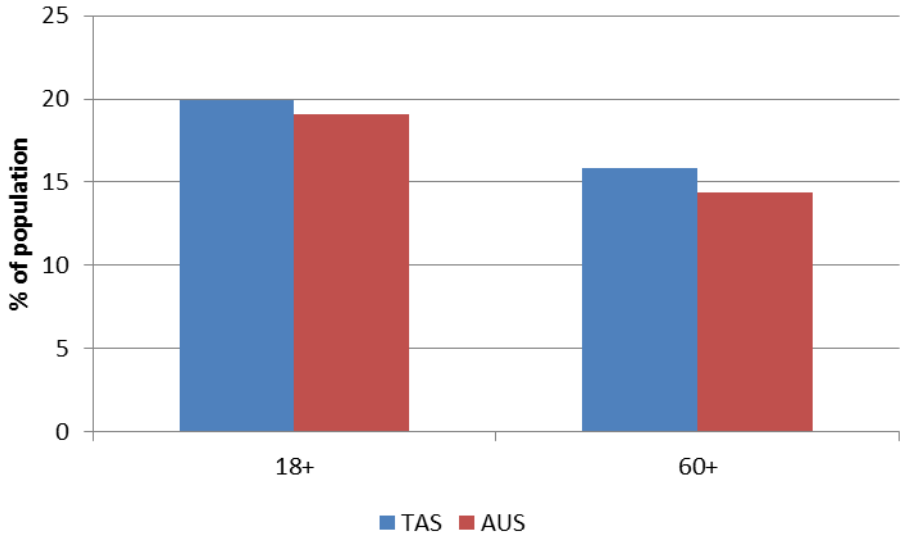
Figure 5.1 Population groups at increased risk



Source: ABS, Catalogue 3101.0 and 3222.0

Historically, Tasmania has also had a larger proportion of their population in the zero to 4 age range than the rest of Australia, but this trend reversed in 2004 and Tasmania is expected to continue to have a slightly smaller proportion of their population in this age group than the national average based on population projections.

Figure 5.2 Proportion of adult population with lifetime risk alcohol consumption



Source: AIHW (2014), supplementary table 7.7

Alcohol consumption has been identified as being a risk factor for fatalities in fires (Department of Emergency Services, 1998). Lifetime risk of alcohol-related harm is measured by an adult having on average more than two standard drinks per day. Figure 5.2 shows that the proportion of the adult population who averaged more than two standard drinks per day was greater for Tasmania than the national average. Further, combining

alcohol and age, Tasmania also has a larger proportion of its population over 60 years that average more than two standard drinks per day.

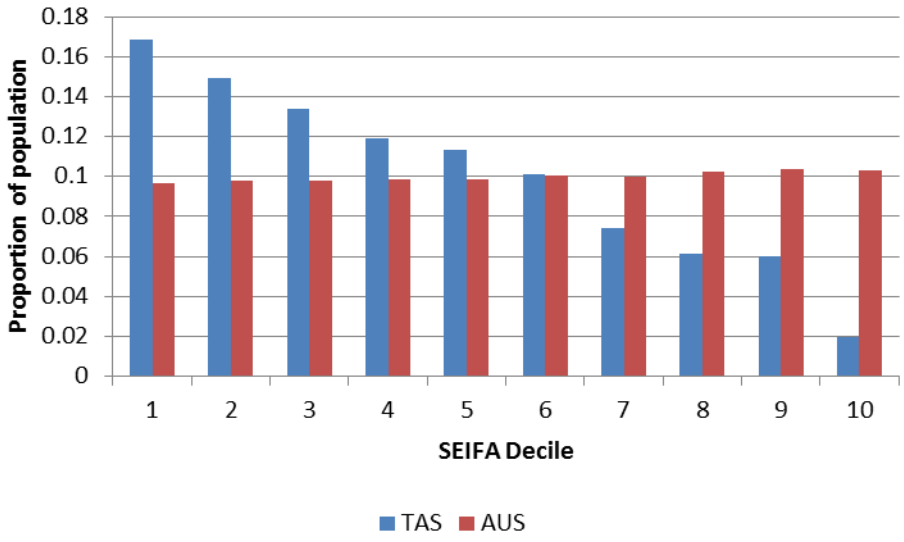
Not being engaged in the workforce is another risk factor identified. Figure 5.3 presents the yearly average of the monthly employment to population ratio for Tasmania and Australia. Tasmania generally has a higher proportion of its civilian population aged 15 years and over not employed compared to the national average.

Figure 5.3 Employment as a proportion of working age population

Source: ABS, Catalogue 6202.0

The literature also points to low income and low socio-economic advantage as being increased risk factors. Accompanying each Census the ABS publishes the Socio-Economic Indexes for Areas (SEIFA) for all areas across Australia. This ranks areas in Australia according to relative socio-economic advantage and disadvantage, using data collected from the five-yearly Census. SEIFAs are most accurate at the smallest spatial level at which the data used to calculate the indexes are available, which is termed the Statistical Areas Level 1

Figure 5.4 SEIFA Index of Advantage and Disadvantage



Source: ABS SEIFA, Catalogue 2033.0.55.001

(SA1s). Across Australia over 52,500 SA1s are ranked according to their relative advantage and disadvantage. At small areas such as SA1s, each decile has roughly the same population across Australia (10 per cent). However, Figure 5.4 shows the disparity between Tasmania and the rest of Australia. In the case of Tasmania, the largest proportion of people reside in the lowest decile, with fewer Tasmanians making up each decile as they progress higher. The lowest decile, where residents have low advantage and high disadvantage, contains almost 17 per cent of Tasmanians, where it only contains less than 10 per cent of all Australians. Similarly, the highest decile has just 2 per cent of Tasmanians, compared to slightly more than 10 per cent of the total population of Australia.

Other socio-economic characteristics taken from the 2011 Census of Population and Housing are presented in Table 5.1. The median age is higher in Tasmania, reflecting the results shown in Figure 5.1. In addition, a higher percentage of people require core assistance in Tasmania. Both median individual and family income are considerably less in Tasmania than the national medians. Tasmanians are more likely to have lower education standards, with 15.9 per cent of Tasmanians not having completed Year 10, compared to 13.6 per cent of Australians. Similarly, 53.3 per cent of Tasmanians had a post-school qualification, compared to 58.3 per cent across Australia.

Table 5.1 Selected socio-economic characteristics of Tasmania and Australia, 2011

	Tasmania	**Australia**
Median age	40	37
Median individual income ($ per week)	499	577
Median family income ($ per week)	1203	1481
Paying rent (% of households)	27.1	30.4
Core activity need for assistance (% of pop)	6.1	4.9
Less than Year 10 education (% pop aged 15+)	15.9	13.6
Post school qualification (% pop aged 15+)	53.3	58.3

Source: ABS, 2011 Census of Population and Housing

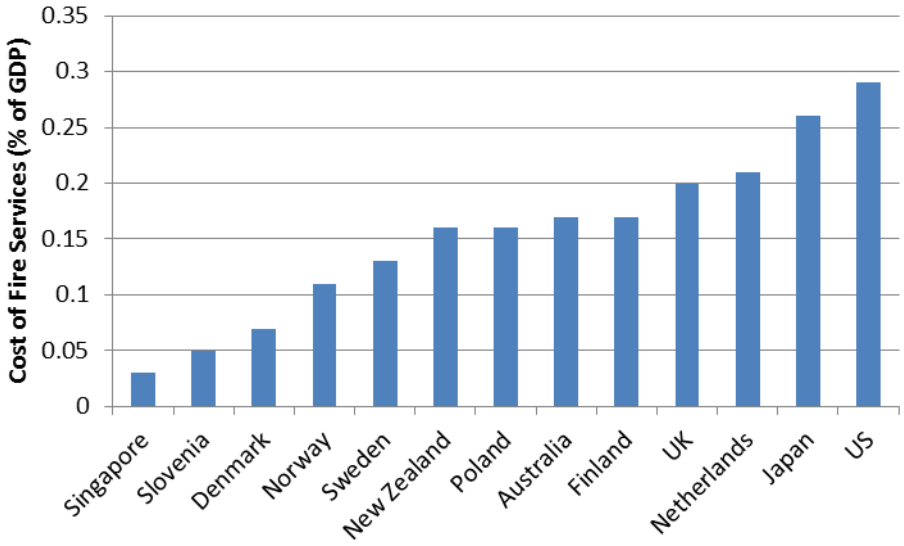
5.2 Fire service resources

This section looks at the resources allocated to fire prevention and suppression in the various jurisdictions across Australia, as well as providing some international context.

Figure 5.5 shows the cost of fire services for a number of countries as a proportion of GDP. Singapore spends the lowest proportion of GDP on fire services at just 0.03 per cent, while the US spends the most at 0.29 per cent. Australia spends 0.17 per cent of GDP on fire services.

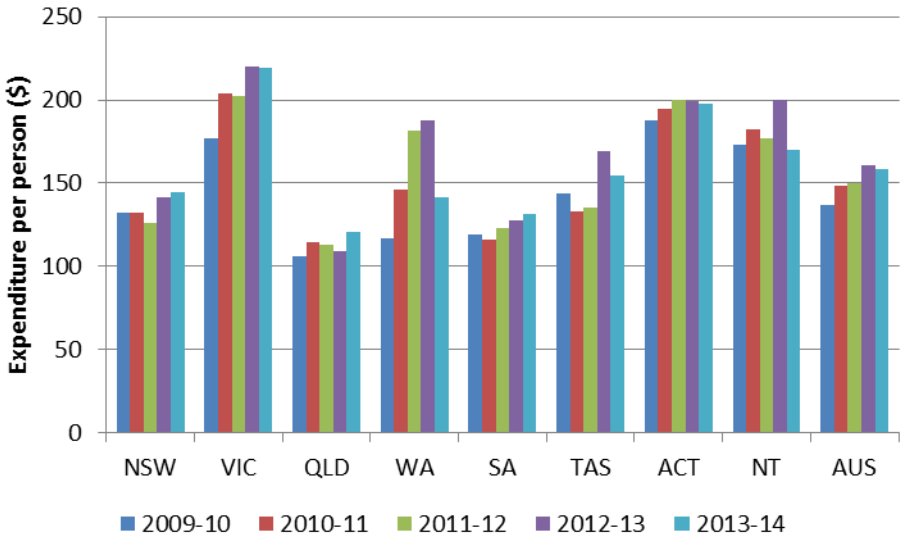
Figure 5.6 shows a comparison between the Australian states and territories on the amount of expenditure of fire services on a per capita basis. Victoria, Northern Territory and the ACT spend the most per person, with Tasmania slightly below the national average in most years. Of note is the significant increase in expenditure per person in Tasmania for the 2012-13 financial year, the year of particularly bad bushfires in Tasmania. The previous two years had seen the expenditure around $135 per person, rising to $169 per person in 2012-13. This reduced to $154 per person in 2013-14.

Figure 5.5 International comparison of the cost of fire services, 2008-10



Source: World Fire Statistics Centre (2014)
Note: Slovenia is for 2002-04, Norway is for 2003-05 and Denmark is for 2006-06

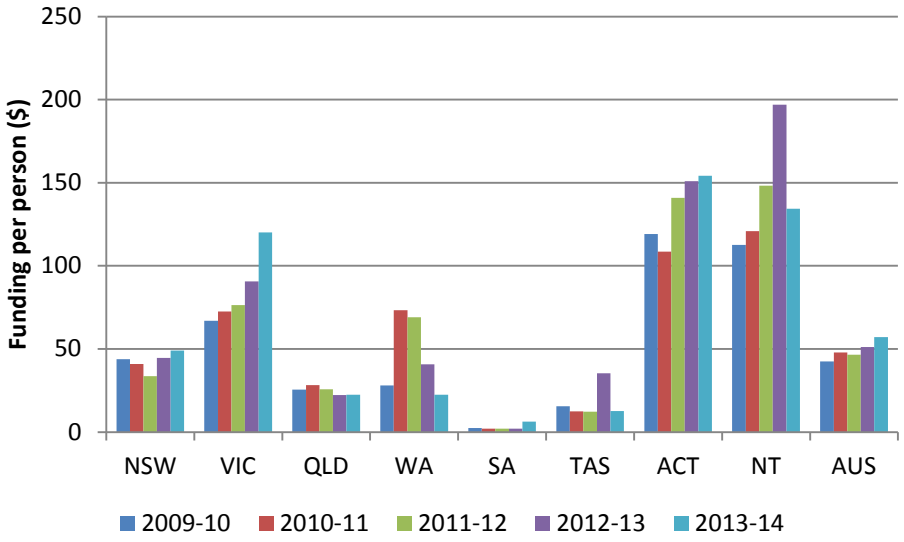
Figure 5.6 Fire service expenditure, per person (2013-14 dollars)



Source: SCRGSP (2015)

Different jurisdictions have a range of funding models they use to provide resourcing to fire service organisations. Some states/territories charge large levies on property owners and/or insurance companies, while others rely more on government funding. Figure 5.7 shows the amount of funding from government per person for each state and territory. As can be seen South Australia gets very little funding direct from government, with Tasmania receiving the next smallest relative amount. Again there was a large increase in 2012-13 coinciding with the large bushfires in Tasmania. In contrast Tasmania receives the highest per person amount from user charges.

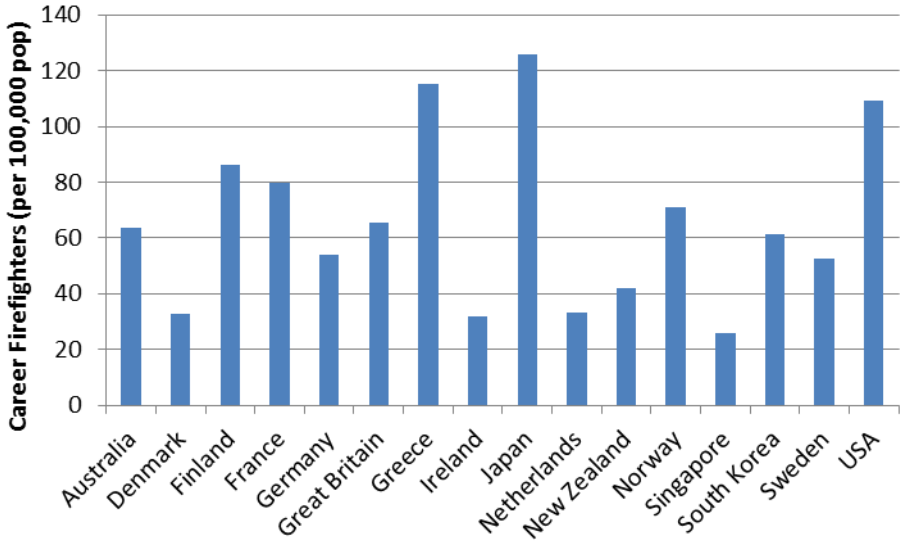
Figure 5.7 Government funding, per person (2013-14 dollars)



Source: SCRGSP (2015)

Figure 5.8 presents data on the number of career firefighters in a number of countries. Australia has just over 60 career firefighters per 100,000 population, just below the average of this cohort of countries. This is less than Japan, Greece, the US, Finland, France, Norway and Great Britain.

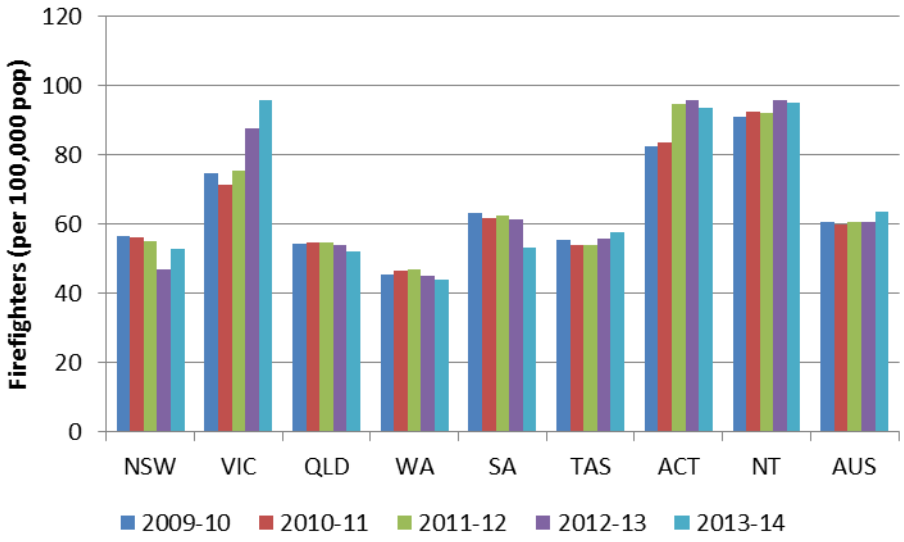
Figure 5.8 Career firefighters (per 100,000 population), 2001-13



Source: CTIF (2015); SCRGSP (2015)
Note: Data for Australia is for 2013-14 (includes permanent, part-time and other)
The Scandinavian countries have many part-time firefighters not included in these figures

Across Australia, Tasmania has just below the average number of career firefighters per 100,000 population (Figure 5.9). In 2013-14 Victoria (95.5), the Northern Territory (94.7) and the ACT (93.5) had the largest number per 100,000 population, with Tasmania next with 57.4 firefighters per 100,000 population.

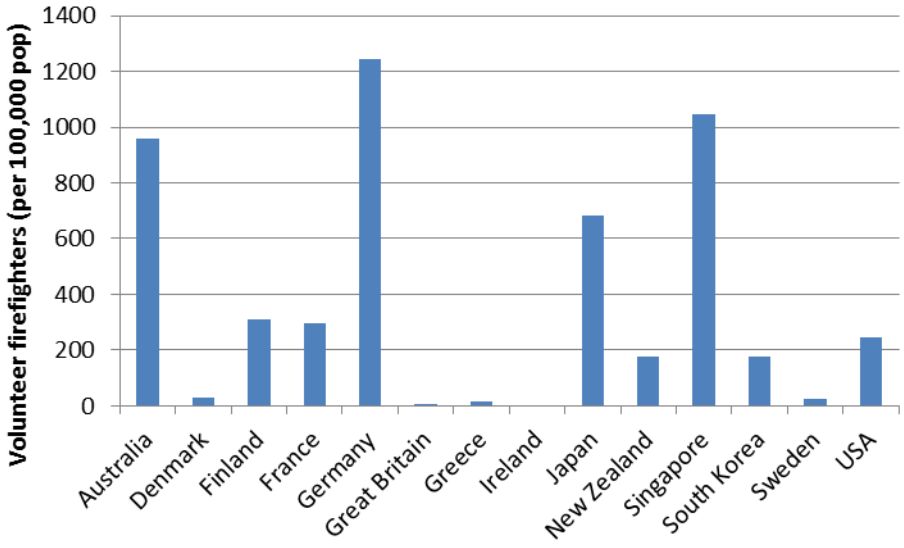
Figure 5.9 Career firefighters in Australia (per 100,000 population)



Source: SCRGSP (2015)
Note: includes permanent, part-time and other

Different countries place varying emphasis on the importance of volunteer firefighters throughout the world (Figure 5.10). Australia has a high ratio of volunteer firefighters to population, with only Germany and Singapore having more volunteer firefighters per 100,000 population of the countries listed. The high number of part-time firefighters in the Scandinavian countries may reflect their lower proportion of volunteer firefighters, however much of Europe has relatively low numbers of volunteer firefighters; as does the US.

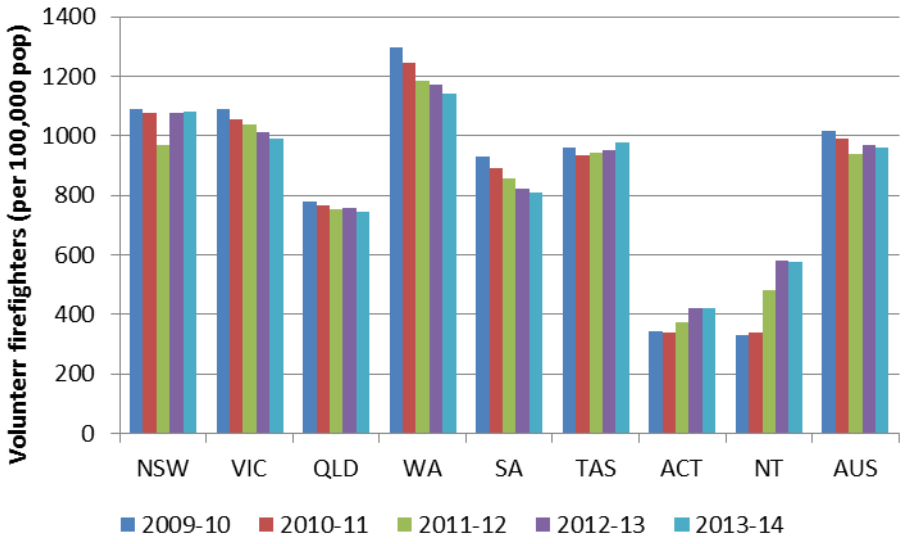
Figure 5.10 International comparison of volunteer firefighters (per 100,000 pop), 2001-13



Source: CTIF (2015); SCRGSP (2015)
Note: Data for Australia is for 2013-14

Across Australia, Tasmania had slightly above the national average of volunteer firefighters per 100,000 of population in 2013-14 (Figure 5.11). Previously Tasmania has had slightly less than the national average, with the 2013-14 SFC Annual Report (SFC, 2014: 28) citing "operational volunteer numbers have increased during the past 18 months, mainly as a result of the heavy bushfire season in 2013 when volunteer intake increased by approximately 200 members." Volunteer numbers are regularly changing and it is difficult to estimate the number of volunteers who are operational. Approximately a fifth of Tasmania's volunteer firefighters are termed support volunteers, comprising non-operational ageing members, family members, juniors and cadets. Western Australia has the highest reliance on volunteer firefighters, while the ACT and Northern Territory have much smaller volunteer numbers, offset by their larger numbers of career firefighters as we saw in Figure 5.9.

Figure 5.11 Volunteer firefighters in Australia (per 100,000 population)



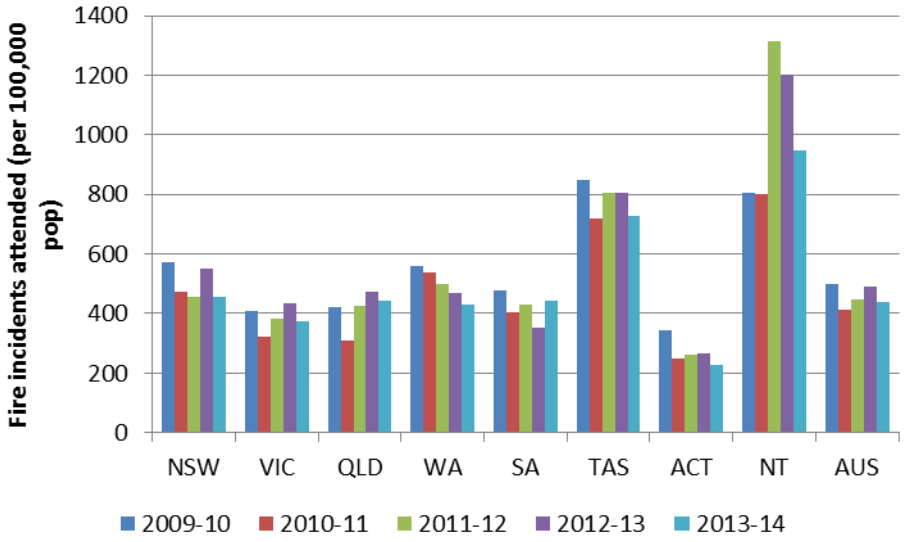
Source: SCRGSP (2015)
Note: volunteer numbers include volunteer fire support staff

5.3 Fire incidents

The total number of fire incidents attended by fire services across the states and territories per 100,000 population is shown in Figure 5.12. Generally, Tasmania has the second highest rate of fires attended to by fire services, about 800 fires per 100,000 population annually. In 2008-09 Tasmania had more fires attended to per 100,0000 population than the Northern Territory, giving it the highest rate for that year.

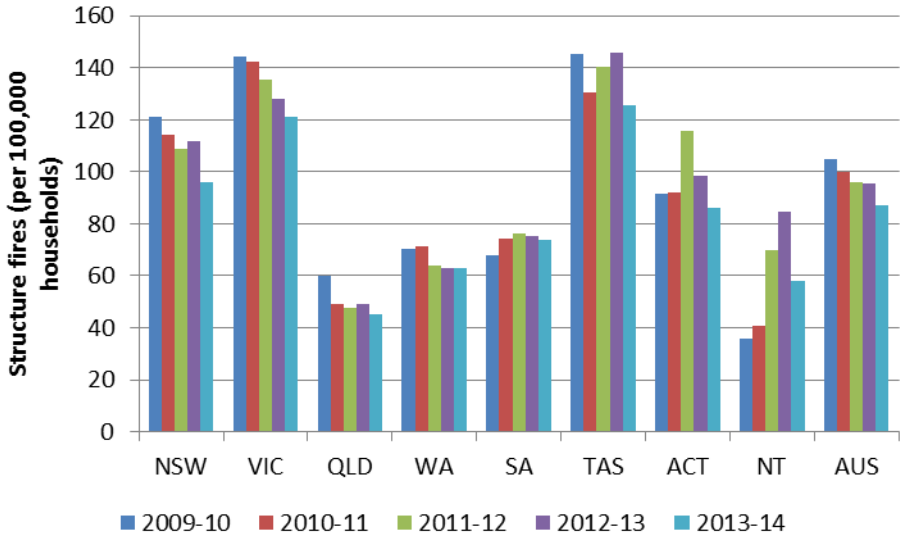
Tasmania also has a high rate of residential structure fires per 100,000 households compared to the other states and territories (Figure 5.13). While the national average was 87 fires per 100,000 households in 2013-14, Tasmania had over 125 fires per 100,000 households. This data is not entirely comparable across all states and territories, yet the rate of fires in Tasmania is consistently high.

Figure 5.12 Total fire incidents attended (per 100,000 population)



Source: SCRGSP (2015)

Figure 5.13 Residential structure fires (per 100,000 households)

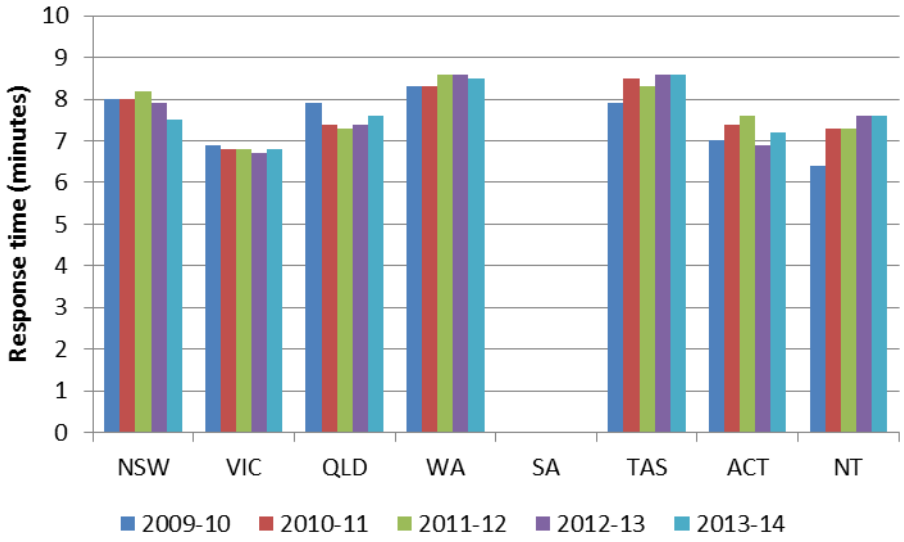


Source: SCRGSP (2015)

5.4 Response to fire incidents

An important performance indicator for fire incidents are response times, as they are critical to minimising loss of life and damage to property. Some jurisdictions spell out response time targets, however the TFS includes acceptable response times as a priority in their allocation and deployment of resources based on assessed risk. Response time data are generally presented as the 50th percentile and the 90th percentile. Table 5.14 shows the response times to structure fires at the 50th percentile for the states and territories of Australia. Tasmania had the slowest average response time at the 50th percentile across all jurisdictions for 2013-14, with an average of 8.6 minutes.

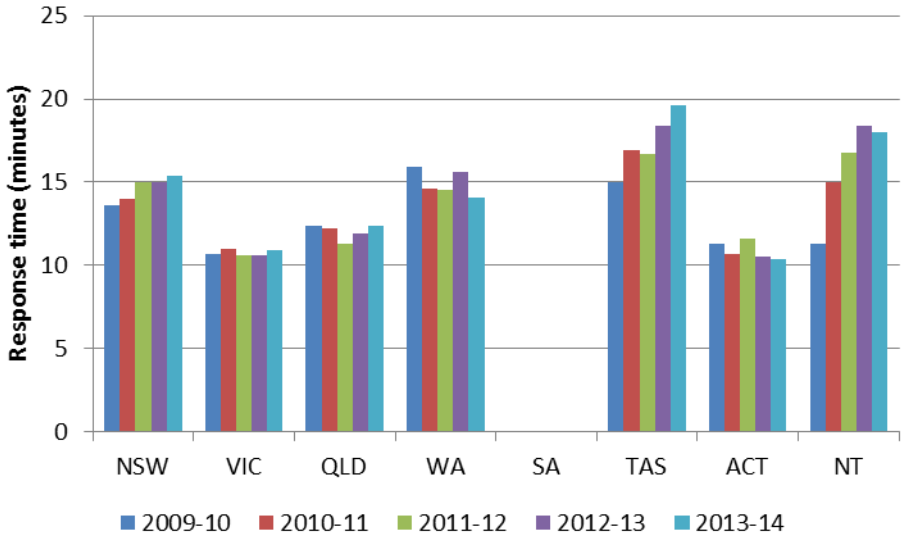
Figure 5.14 Response times to structure fires, 50th percentile



Source: SCRGSP (2015)
Note: response times include call taking time. Data not available for SA

Tasmania also has the highest response time to structure fires at the 90th percentile, as shown in Figure 5.15. In both cases Victoria and the ACT have the lowest response times across the country.

Figure 5.15 Response times to structure fires, 90th percentile



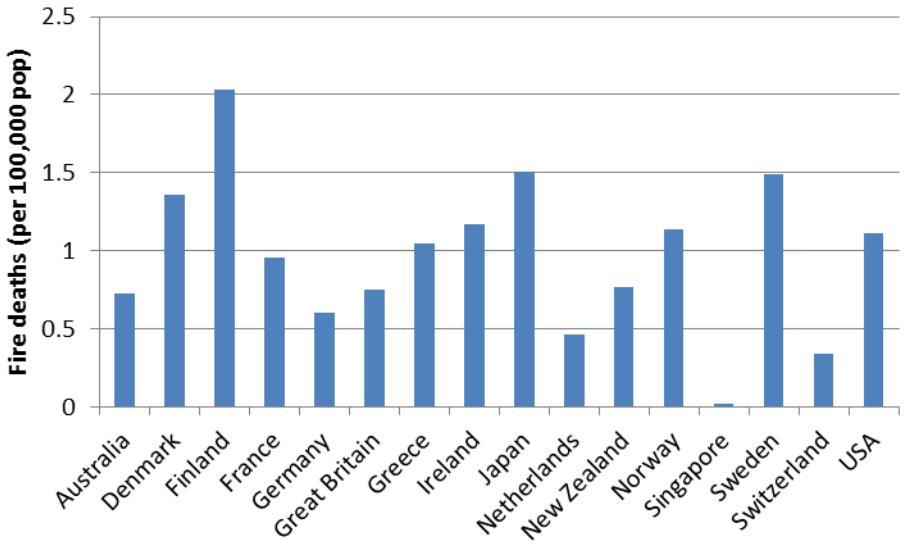
Source: SCRGSP (2015)
Note: response times include call taking time. Data not available for SA

5.5 Outcomes

The preceding subsections related the resources and efficiency of the fire services across Australia, as well as the preparedness and response to fire events. We move now to look at the outcomes of fire events and their impact on the community. There are indicators used to measure the outcomes of fire events; the first of these being the fire death rate. Figure 5.16 shows an international comparison of the fire death rate between Australia and a range of other countries. As can be seen, Australia averaged a fire death rate in the middle range of

countries listed. It must be noted that the figure includes the 2009 Victorian bushfires, which accounted for 173 deaths and in previous years Australia's death rate was usually less than 0.5 per 100,000 population.

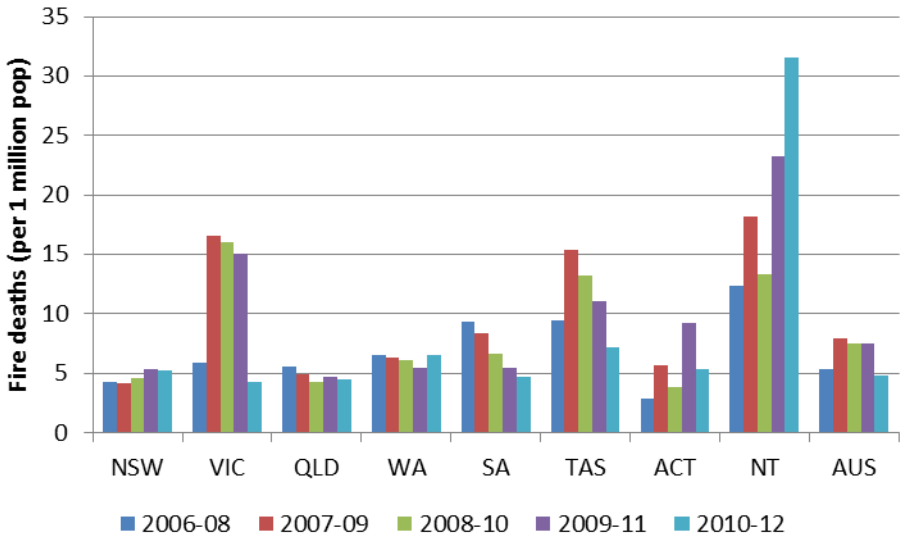
Figure 5.16 International comparison of fire death rates (per 100,000 population), 2008-2010



Source: World Fire Statistics Centre (2014)
Note: France data is for 2007-09

Generally, deaths are averaged out over three year periods to smooth the effects of particularly devastating events. Figure 5.17 presents the fire deaths across the states and territories of Australia as a three year average. The years 2007-09, 2008-10 and 2009-11 all include the 173 deaths from the 2009 Victorian bushfires, affecting the results for both Victoria and all of Australia. What is noticeable is the rate of death in Tasmania in 2007-09 and 2008-10, due to 9 and 10 deaths in 2008 and 2009 respectively. This nearly equals the Victorian rate for those three-year periods. For the 2010-12 period, Tasmania averaged the second highest deaths per million people (7.2), well above the national rate (4.8).

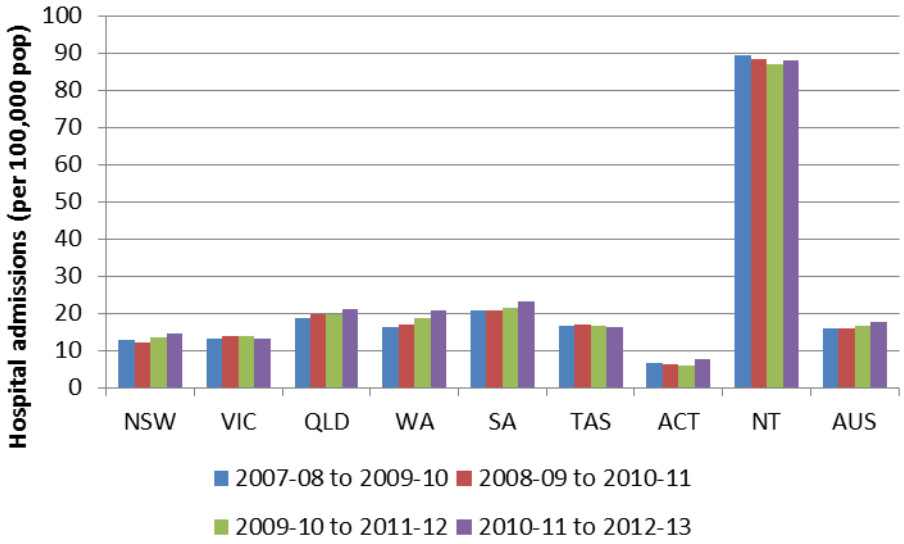
Figure 5.17 Fire deaths (per million people)



Source: SCRGSP (2015)

The fire injury rate can be seen as the rate of hospital admissions due to fire events. Figure 5.18 shows the hospital admission rates across Australia per 100,000 population. The Northern Territory has by far the highest rate of hospital admissions with the ACT the lowest. Tasmania has about the national average of hospital admissions.

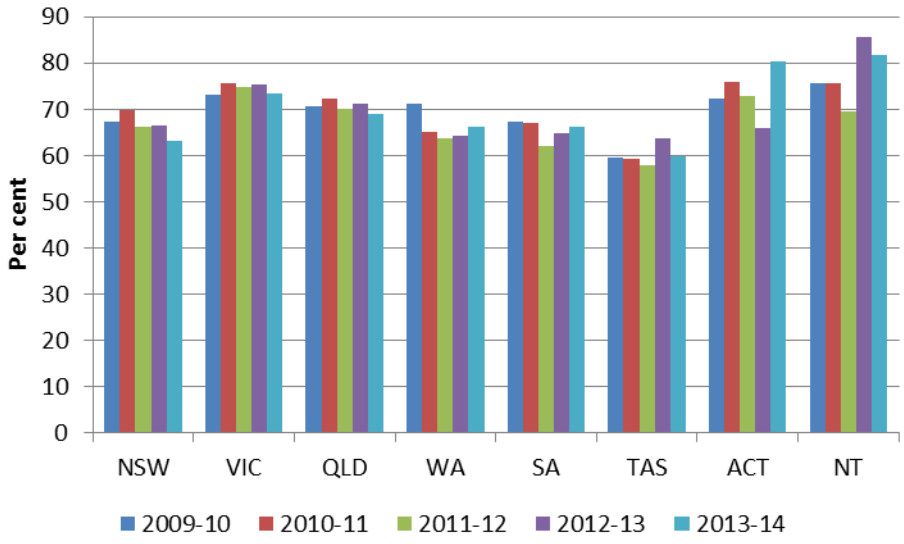
Figure 5.18 Hospital admissions due to fire injury (per 100,000 population)



Source: SCRGSP (2015)

An important measure of the outcome of structure fires is whether they are confined within the room or object of origin. Maximising this is a key performance indicator of the TFS, as it reflects not only the response of fire crews, but the adequacy of resources. Figure 5.19 compares Tasmania's fire service success with confinement of structure fires with the other states and territories. The Northern Territory generally has the highest proportion of structure fires confined to the room of origin, while Tasmania has the lowest across all years presented.

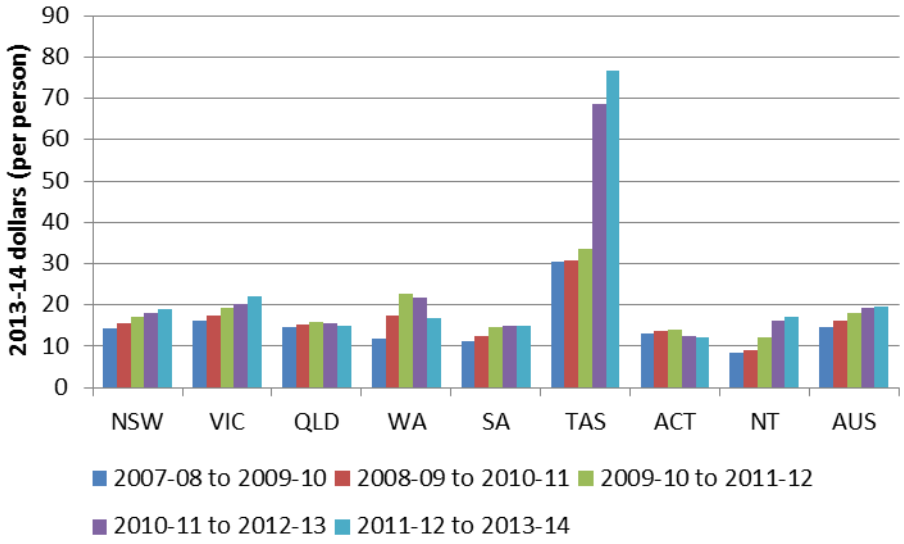
Figure 5.19 Structure fires confined to room of origin (per cent)



Source: SCRGSP (2015)

The actual value of asset losses from fire is a community cost. Previously, to measure direct fire losses, property losses were assessed by firefighters, but this is no longer reported. Data now reported to indicate the value of asset losses from structure fires are the total value of fire event insurance claims per person in the population. This is done on a three year rolling average, as shown in Figure 5.20. Again Tasmania has quite a high relative loss per person. This is exacerbated because major events, where the total claims are greater than $100 million, are excluded from the data. This means the 2009 Victorian bushfires are not included in the data, but the 2013 Tasmanian bushfires are included, as the total claims did not exceed $100 million.

Figure 5.20 Insurance fire event claims per person (2013-14 dollars)



Source: SCRGSP (2015); Insurance Statistics Australia Ltd

5.6 Summary

This section has reviewed the comparative situation in Tasmania in terms of its risk factors in relation to negative fire event outcomes, resources dedicated to responding to fire events and the performance of the state. Cook *et al.* (2012) performed a similar comparison and found that Tasmania was:

> A population facing higher risk and experiencing more fires but having fewer fire fighting resources and funding and achieving poorer results in terms of speed of response to fires and minimisation of loss of life and property. (Cook *et al.*, 2012: 88)

We can make a similar conclusion given the current situation based on the comparisons we have made throughout this section. Firstly, Tasmania has a higher proportion of people who are identified as being at greater risk and more vulnerable to negative fire event outcomes. Tasmania has a larger proportion of its population over 65 years of age than the national average. It has a larger proportion of adults with lifetime risk alcohol consumption, more than two standard drinks per day. Tasmania also has a lower proportion of its working age population engaged in employment. Possibly as a consequence of this, Tasmania has lower median individual and family income levels than the nation. In addition, Tasmania has a higher proportion of people with disabilities requiring assistance, as well as a population that is less educated than the nation. Tasmania has a smaller proportion of its population less than five years of age than the nation and also has a smaller proportion paying rent than the national average.

Tasmania still lags behind the national average in terms of resources given to its fire service. Expenditure on fire services per person is slightly under the national average, while the amount of government funding per person is also very small compared to the rest of the country. Interestingly, both these measures increased markedly in 2012-13 due to the particularly bad Tasmanian bushfires of that summer. Tasmania has slightly below the national average career firefighters relative to population, but about average volunteer firefighters.

Tasmania also still has a much larger incidence of fire relative to population than the national average. Total fires are almost double the national average, while residential structure fires relative to households are the highest in the country in most years.

Tasmania ranks with Western Australia as being the slowest to respond to fires at the 50th percentile, while at the 90th percentile Tasmania again ranks poorly just ahead of the Northern Territory. These slow response times no doubt have an influence on the outcomes from fires in Tasmania, which also rank poorly compared to the rest of the country. Tasmania has a higher than average fire death rate, but is about average in terms of hospital admissions due to fire injury. It also has the lowest proportion of fires confined to the room of origin. Finally it has the highest insurance claims per person for fire events per person (though this must be qualified as certain major disasters are not included).

Just as Cook *et al.* (2012) found, Tasmania still has all the characteristics of a vulnerable population with higher risk factors, a higher incidence of fire and worse outcomes, with poorer than average firefighting resources and funding. As in 2012, there is still substantial room for improvement in the performance of the TFS. Notwithstanding, essentially cutting their funding will not help this situation.

6. Tasmania: a special case

We saw in the preceding section that Tasmania has higher risk factors and worse fire outcomes than the rest of the country. This section looks at the Tasmania case in detail, particularly the performance of the TFS, in an attempt to determine whether the resources devoted to firefighting in Tasmania are sufficient to meet the goals of the SFC as outlined in Section 2.

The TFS has a range of performance indicators it reports on each year. These are:

- Fire fatality rate;
- Fire injury rate;
- Structure fire rate; and
- Value of building stock lost in fires as a proportion of the total building stock.

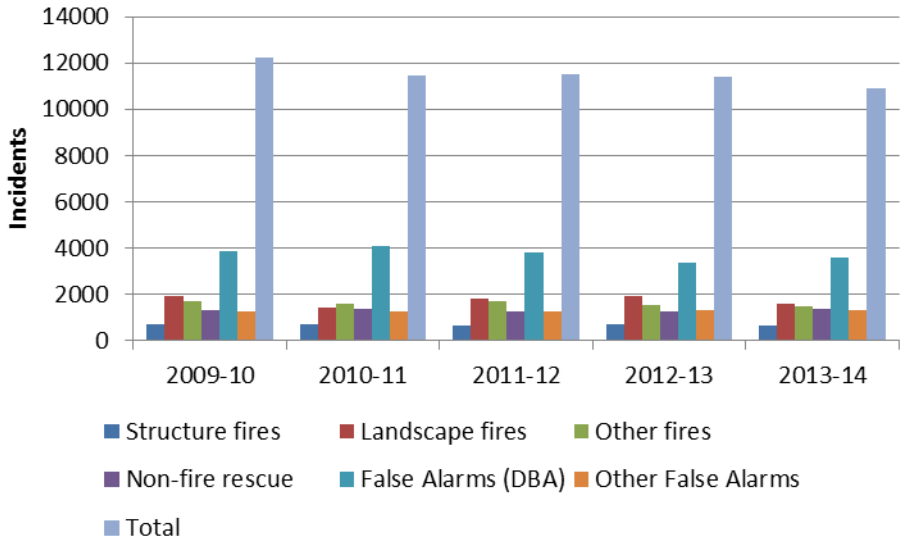
Three of these indicators do not have specific targets to be met, but rather the year on year data are compiled and compared, with the focus on whether improvements are made over the course of time. The point is made that there is more variability in Tasmanian data than in Australia as a whole due to the relatively small population, particularly in regards to fire and injury rates. In addition there are performance targets set for some benchmark indicators under the categories Operational (of which structure fire rate is one), Financial and Human Resources.

The first part of this section looks at the types and causes of incidents in Tasmania and how this compares to targets, then we look at the response times by region type, followed by a closer look at the outcomes of fire events. Next, we build on Cook *et al.* (2012) in a discussion of the adequacy of fire services in Tasmania. Finally, we look at the need to increase firefighters in Tasmania.

6.1 TFS incidents and outcomes

The TFS is responsible for responding to the majority of fire incidents in Tasmania. FT and PWS also have responsibility for some fires, but generally their numbers are very small. The most common call-out for TFS brigades are direct brigade alarms (DBA), which are mostly

Figure 6.1 Types of incidents

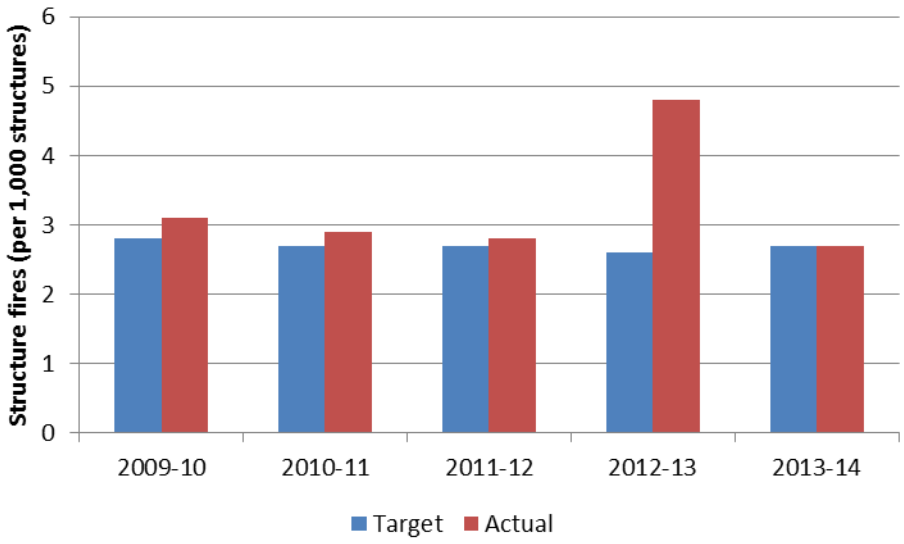


Source: SCRGSP (2015)
Note: the total is not a sum of the other types as there as more incident types not reported

false alarms. Landscape fires are generally the next most common incident TFS staff respond to. The last five years has seen a decrease in overall responses to incidents, as shown in Figure 6.1

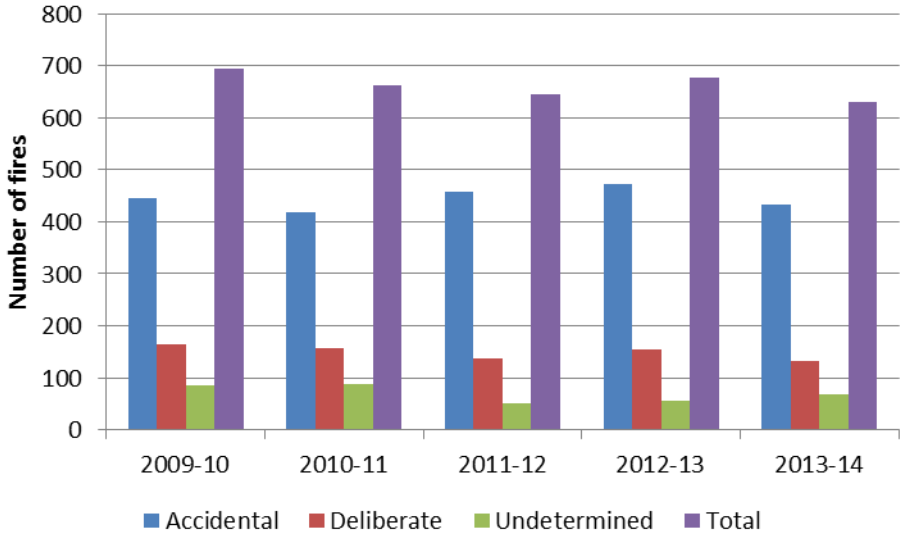
The rate of structure fires has fallen slightly over the last five years, aside from the increase in 2012-13 which was inflated by the 431 structures burned during the January 2013 bushfires. The target for preventable structure fires has changed little year to year, with the 2013-14 year being the first one to match the target over the period examined (Figure 6.2). The target for 2013-14 was 2.7 fires per 1,000 structures, but there is hope the downward trend will continue with the forward target for 2014-15 being 2.6 fires per 1,000 structures and for 2015-16 2.5.

Figure 6.2 Structure fires (per 1,000 structures)



Source: SFC Annual Reports (various years)

Figure 6.3 Cause of structure fires

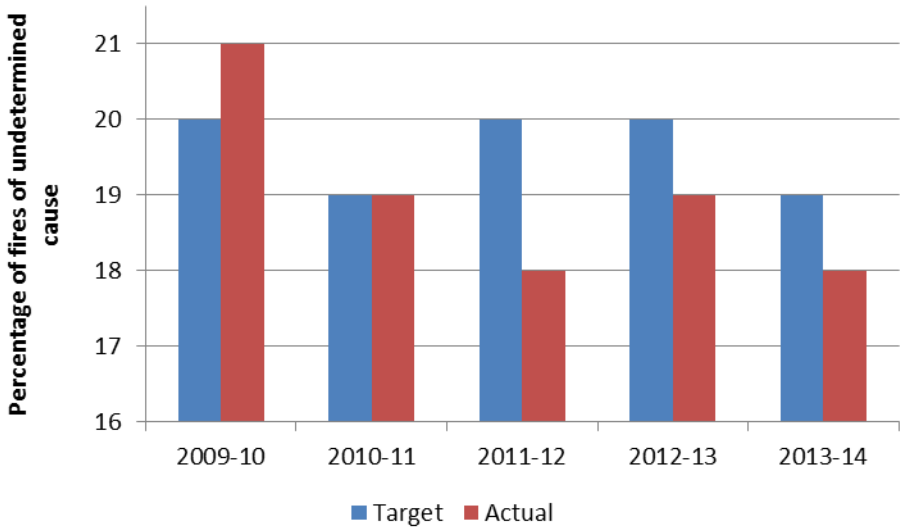


Source: SCRGSP (2015)
Note: accidental includes other ignition factors such as natural event or motor vehicle fire

Accidental fires are by far the most common cause of structure fires, as shown in Figure 6.3, making up between 63 and 70 per cent of total structure fires annually. Fires that are deliberately lit make up between a fifth and a quarter of total fires.

From Figure 6.3 it appears the number of fires of undetermined cause is falling. This is also a reportable performance indicator with a pre-set target. Figure 6.4 shows the target and actual rate of fires of undetermined cause for recent years. In recent years the actual rate of fires of undetermined cause has been below the target. Perhaps to reflect this the targets going forward are 18 per cent for both 2014-15 and 2015-16.

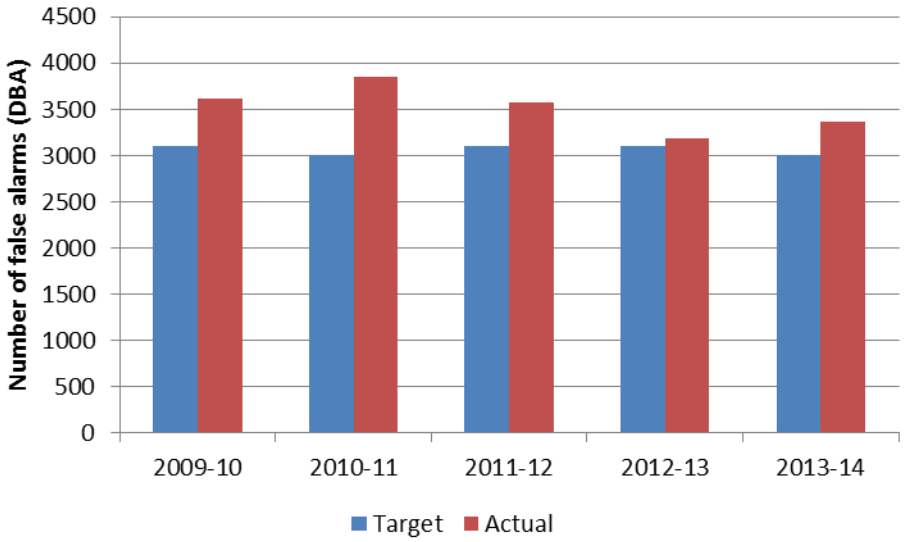
Figure 6.4 Percentage of fires of undetermined cause



Source: SFC Annual Reports (various years)

The other two performance targets that are Operational and have set targets are aimed at reducing the number of system generated false alarms and the increase confinement of fires to the room of origin. TFS works with individual premises on reducing unwanted alarm activations from direct brigade alarms (DBA) in an effort to minimise false alarms.

Figure 6.5 Number of false alarms (DBA)

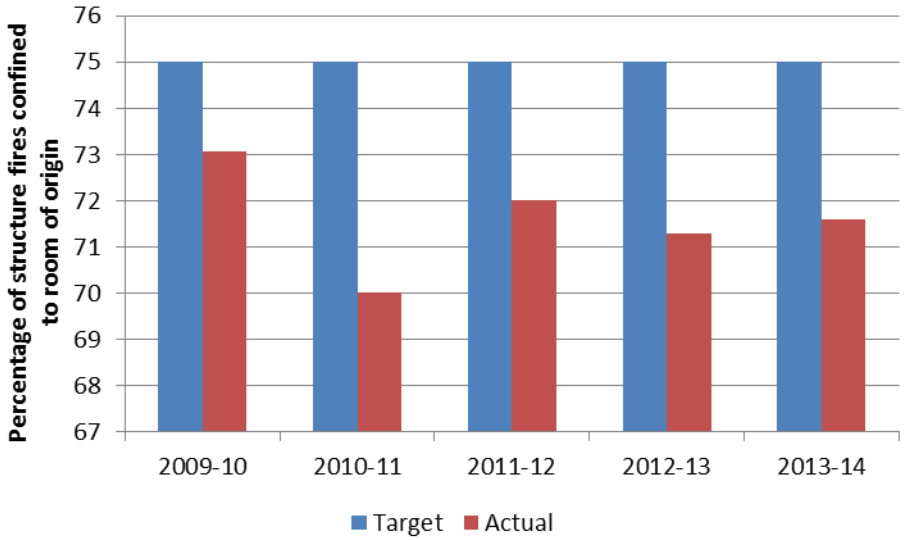


Source: SFC Annual Reports (various years)

While staff are attending to false alarms there is always the chance they will be later to an incident requiring their skills. In recent years the number of false alarms (DBA) have been consistently above the target, as shown in Figure 6.5. Despite this the forward targets are 2,900 for both 2014-15 and 2015-16.

The final operational performance target is the percentage of structure fires confined to the room of origin, recent years data shown in Figure 6.6. Once again the actual rate of confinement is less than the target in all years shown.

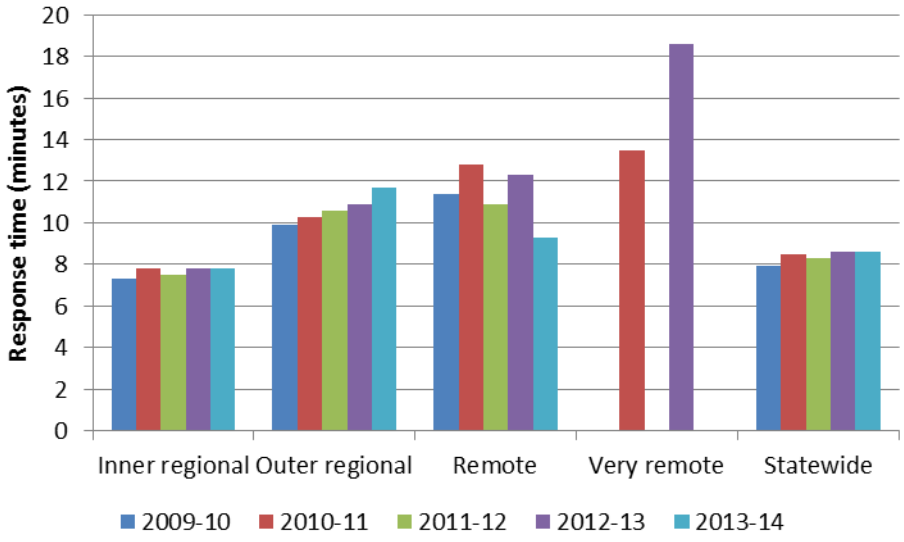
Figure 6.6 Percentage of structure fires confined to room of origin



Source: SFC Annual Reports (various years)

Confinement of structure fires to the room of origin is heavily influenced by the response time of the fire service. As we saw in Section 5, Tasmania has one of the longest response times in the country at both the 50th and 90th percentile. Response times vary across different types of region, affected by things like distance from fire station to fire, traffic/road conditions, ease of access and terrain. Figure 6.7 shows the response times for the 50th per-

Figure 6.7 Response times to structure fires by region type, 50th percentile

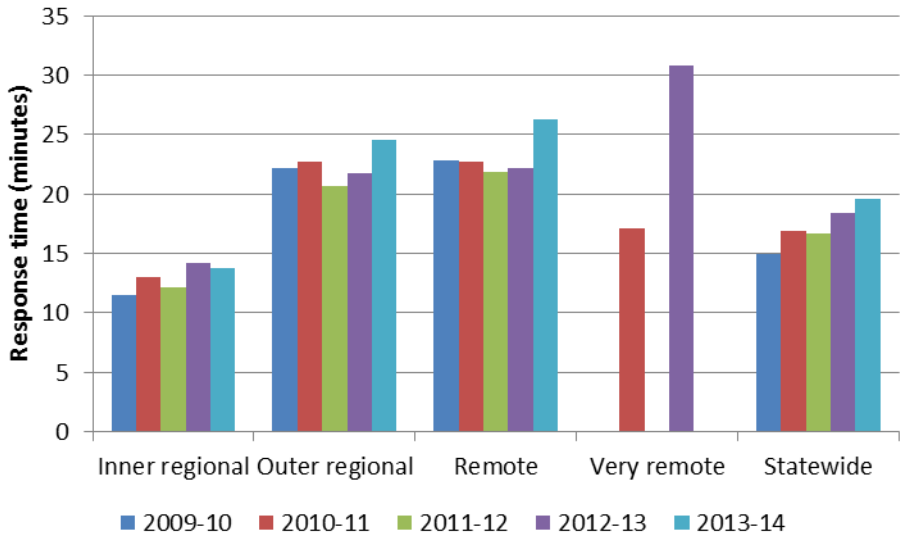


Source: SCRGSP (2015)

centile across different region types, categorised by the ABS remoteness classification. As can be seen, generally response times are greater the more remote the region, which is to be expected. Tasmania has no areas classified as major city areas.

A similar pattern exists for response times at the 90th percentile, as shown in Figure 6.8. The concern regarding response times, at both the 50th and the 90th percentile, is that there appears to be an increase in response times across the state, and across most of the region types over the period shown.

Figure 6.8 Response times to structure fires by region type, 90th percentile



Source: SCRGSP (2015)

We saw in the previous section that Tasmania has a higher death rate than all of Australia, with much variation in deaths from year to year. What was missing from that analysis were the causes of the fires. Tasmania has a higher proportion of fire deaths by intentional self-harm than any other state or territory. Over the decade 2003-2012 almost a third of fire deaths in Tasmania were attributable to intentional self-harm, while across all of Australia this was

Figure 6.9 Fire deaths by year

Source: SCRGSP (2015)

less than a quarter. Figure 6.9 shows the fire deaths in Tasmania over the period 2000-2012. There was an average of nearly six deaths per year over this period. In the 2013-14 SFC Annual Report it is reported that there were no accidental fire deaths in 2012-13 or 2013-14.

6.2 Adequacy of fire services in Tasmania

One of the major goals of the TFS is to "deliver safe, effective and efficient strategies for preventing, preparing for and responding to fires and other emergencies" (SFC, 2014b: 4). Cook *et al.* (2012) provide a detailed discussion of the adequacy of emergency services provided by the TFS. As part of their discussion they raise the idea of a Standard of Fire Cover (SOFC), citing that in Tasmania the State Fire Protection Plan provides no specification of standard response times or weight of response. This is in contrast to other states in Australia where specific targets are set for these two parameters, varying depending on the region in question. They go on to say that "defining performance objectives in terms of response times, minimum resource commitments and staff competencies, would place the safety needs of the community and firefighters at the forefront of consideration in times of fiscal constraint." (Cook, *et al.*, 2012: 96). It would seem the 2014-15 Tasmanian Budget was one of large fiscal contraction, where the SFC incurred large extra expenses with little extra income. It is times like this where a SOFC would enable the government to see where the TFS is under pressure and how taking away resources would hinder their progress further.

Cook *et al.* (2012) examine a case study of the adequacy of services in north-west Tasmania in the latter half of 2011. They found that in many incidents there was an insufficient response, both in terms of time and numbers and in some cases no fire crews attended incidents. This case study found that, despite a review by KPMG on the emergency response in Tasmania in 2009, serious inadequacies persisted particularly in this region.

In Section 5 we saw the reliance that Australia places on volunteer firefighters is among the highest in the world. And while their value to the economy is irreplaceable, often the day to day organisation of volunteer firefighters and volunteer brigades can place the adequacy of the fire service in jeopardy. There are common issues surrounding volunteer firefighters, that are not just unique to the Tasmanian or indeed Australian situation. McLennan (2008) cites the major operational problems facing volunteer-based fire services as:

- Shrinking brigade memberships in many small remote rural (and ageing) communities;
- Static brigade memberships in new population growth centres; and
- Lack of volunteers able to turn out to emergencies during business hours.

In addition there is the problem of volunteers not being fully trained in competencies. Training participation varies among volunteers, with some rarely undertaking training on new or refresher courses. McLennan and Birch (2005) estimated that the TFS would lose over one-third of its operational volunteers if mandatory fitness standards were introduced. One positive for the TFS is the recent increase in operational volunteers, as a result of the heavy bushfire season in 2013.

6.3 Increasing Tasmania's firefighters, including climate change considerations

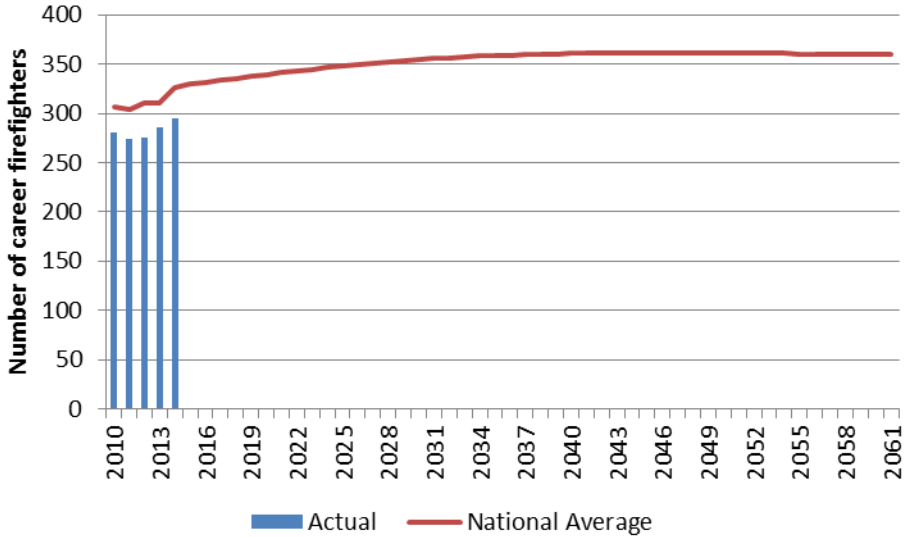
We saw in Section 5 that Tasmania has less than the average number of career firefighters per 100,000 population than the nation as a whole. This was the case despite Tasmania having a higher than national average incidence of fire, worse than national average fire deaths and higher than national average fire losses in terms of insurance claims. This section compares Tasmania to the rest of Australia in terms of its career firefighters and how many extra

firefighters would be required to meet the national average. Further, this section considers a report into firefighter numbers in light of climate change considerations into the future.

The *Tasmanian Fire Fighting Industry Employees' Industrial Agreement 2014* (p. 38) states "the total number of uniformed career personnel covered by the Award is to be no fewer than 285." For the three years 2009-10 to 2011-12 the number of firefighters was below this, reaching 286 in 2012-13 and 295 in 2013-14. The 2013-14 figure of 295 converts to 57.4 firefighters per 100,000 population. Across Australia the number of firefighters per 100,000 population is 63.5. To reach the national average ratio of firefighters to population Tasmania would need 326 firefighters, an increase of 10.5 per cent.

Figure 6.10 shows the gap between Tasmania's actual number of career firefighters and the number that would have been required to meet the national average from 2009-10 to 2013-14. The vertical bars show Tasmania's actual number of career firefighters and the solid line shows the number Tasmania would have needed to have the same as the national average firefighter to population ratio. From 2014-15 on the solid line shows the number of firefighters required given expected population growth (Series B) in Tasmania and keeping the firefighter to population ratio at the current national average. The ABS population projection Series B has Tasmania's population start to fall marginally from 2046. At that point to meet the current national average Tasmania would need 361 firefighters.

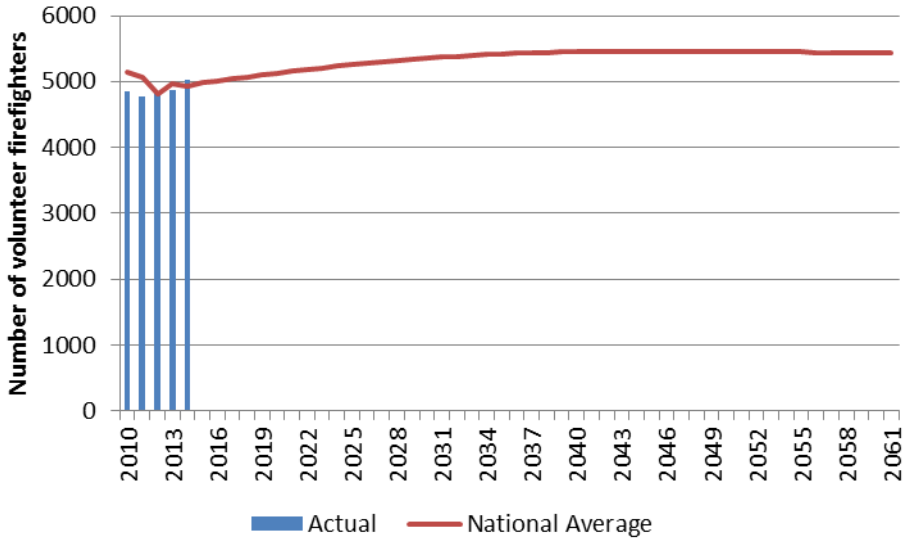
Figure 6.10 Projections of career firefighters



Source: SCRGSP (2015); ABS, Catalogue 3101.0 and 3222.0

We saw in Section 5 that Tasmania has recently had an influx of volunteer firefighters, after the heavy 2013 bushfire season. Tasmania now has slightly above the national average volunteer firefighters per 100,000 population. This was also due to the national average falling, which may happen after services reconnect with volunteers to update their records with the current status of members. Despite the circumstances under which it happened, it is no doubt refreshing for the TFS to have a greater number of volunteers to call on. A projection of required volunteers to meet the current national average into the future though, shows that the current number of volunteer firefighters in Tasmania will not be enough to match the current national firefighter to population ratio in just two years, given projected population growth (Figure 6.11). So it is important that not only are newer volunteers retained but that recruitment still occur in the near future.

Figure 6.11 Projections of volunteer firefighters



Source: SCRGSP (2015); ABS, Catalogue 3101.0 and 3222.0

Not included in the analysis above is a consideration of firefighter resources in the case of increased fire seasons, such as the 2012-13 bushfire season in Tasmania. Cook *et al.* (2012) reviews the literature on the effects climate change is having and is expected to have into the future across Australia and particularly in Tasmania. Some early studies predicted there would be little impact on Tasmania from climate change, that it would get warmer and wetter, with the increased rainfall enough to offset the rising temperature and actually reduce the annual burn area (Nicholls and Lucas, 2007). However, more recent studies suggest forecasting the impact climate change will have on Tasmania is difficult given its location and flora and fauna.

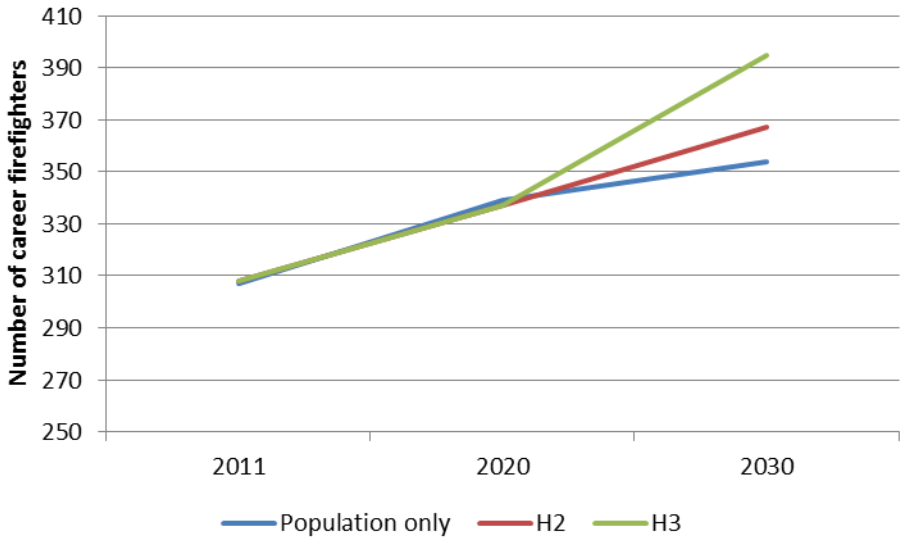
Tasmania is the wettest of the Australian states, yet it still does experience long periods of below average rainfall. White *et al.* (2010) point out that much of the early part of the 21st century saw precipitation deficiencies in parts of the state. Further, the Department of Primary Industries Parks Water and Environment (DPIPWE, 2010) were keen to point out the increased prevalence of extreme fire weather days. The level of risk of fire on any given day is given by the Forest Fire Danger Index (FFDI), derived from weather variables air temperature, wind speed and relative humidity together with a measure of fuel availability (or dryness) called the "drought factor" (Dowdy *et al.*, 2009). A fire weather warning is issued when the FFDI exceeds a value of 50. However the threshold was lowered in Tasmania to 24 because significant fire activity was happening at that level.

More recently, the joint CSIRO/Bureau of Meteorology report on the state of the climate (CSIRO/BoM, 2014) showed that Australia's mean temperature has increased by 0.9°C since 1910. All of Tasmania is in the range of increasing between 0.5-1.0°C over that time. Further, rainfall decile ranges since 1996 for October-April are the lowest on record for much of Tasmania, and below or very much below average for the rest of the state, as well as being below average for most of the state in the April-November months. Most importantly though, the report shows that both the Hobart and Launceston localities have recorded trends of significant increases in the 90th percentile FFDI values (points per decade), meaning more extreme fire weather days are inevitable.

A study into the human resource challenge of adapting to climate change concludes that a large increase in career firefighter numbers is needed to protect the population and property

in Australia (NIEIR, 2013). The study uses two climate change scenarios (outlined in Lucas *et al.*, 2007) and models firefighter numbers needed under both these scenarios at time periods 2020 and 2030. The 2020 prediction for Tasmania is very close to the estimates from Figure 6.10 based on population projections only. However the increases needed in 2030 under both climate change scenarios are substantial, as it is then the authors predict the effects of climate change will be stronger. Figure 6.12 shows the firefighter numbers required using population projections (from Figure 6.10) and under the two climate change scenarios, H3 being where the greatest effects are felt from climate change, H2 more moderate effects. It must be noted the population projections used in this study vary slightly from those in the NIEIR study. Further, to set a baseline number of firefighters the NIEIR study used a combination of figures from the Report on Government Services, 2012, as well as 2011 Census figures.

Figure 6.12 Projected firefighter numbers required under different scenarios



Source: SCRGSP (2015); ABS, Catalogue 3101.0 and 3222.0; NIEIR (2013)

7. Conclusion

The Tasmanian State Fire Commission and its operational arm the Tasmania Fire Service provide a vital service to the people of Tasmania. The TFS is tasked with protecting life, property and the environment from the impact of fire and other emergencies. It is responsible for providing effective response to emergencies, as well as assisting in developing community self-reliance in the prevention of and preparation for fires. To be able to do this the TFS must be properly resourced in order to minimise the impacts of fire in Tasmania. This report has examined the implications for the SFC and TFS of budgetary and organisational changes that impact on the way it runs its business and makes use of its resources.

The 2014-15 Tasmanian Budget saw the newly elected Government take a strong contractionary fiscal position, due to what it saw as a challenging financial and economic environment. Their position was largely guided by two reports published in the first part of 2014 that detailed large deteriorations in the Budget bottom line, with one of the reports recommending the Government take immediate action to address the unsustainable budget position. The deterioration of the 2013-14 Budget was not as pronounced as predicted, with the end result putting the Government in a better position than the original 2013-14 Budget.

Nonetheless, the 2014-15 Budget included a combined $563 million worth of savings by Government and agencies. The major savings strategy for the Department of Police and Emergency Management was to transfer the reporting arrangements for the State Emergency Service. Where the SES had previously reported directly to the DPEM Director, now they would report through the Chief Fire Officer, with the aim of achieving economies of scale and to eliminate duplication of services. This meant the SFC was now responsible for the reporting costs of the SES, yet with the transfer, only a fraction of the costs of reporting was transferred to the SFC. Essentially the SFC had to find over $2 million to fund the SES, from their existing Budget.

Also in the 2014-15 Budget the Government announced it would be funding a Fuel Reduction Burns program. The program would be funded through the Department of Primary Industries, Parks, Water and Environment (DPIPWE) for the amount of $28.5 million over four years. The program though was to be overseen by the Fuel Reduction Unit from within the TFS. Hence the SFC was also to contribute to the Fuel Reduction Burns program by supporting this unit for an amount of almost $900,000. Further, a review of corporate services across the Tasmanian emergency service agencies resulted in corporate services being amalgamated, which placed further strain on SFC funds in the short term.

The combination of these changes meant the SFC had to find over $2.5 million it had not budgeted for. It could not increase its revenue, but was required to increase its expenses. This had a twofold effect on the SFC. On the one hand it was forced to make spending cuts to programs it had made funding commitments to; primarily this affected their capital expenditure program, as well as other forms of expenditure. On the other hand, inevitably it has been unable to find spending cuts large enough to meet the shortfall of revenue and has seen its own budget position deteriorate dramatically. The most recent estimate predicts that the SFC net operating deficit will be $3.4 million greater than projected in the original budget, taking it to over $7 million for the 2014-15 financial year.

Despite a much more positive outcome for the 2013-14 Tasmanian Budget than expected and similarly a more positive estimated outcome for the 2014-15 Tasmanian Budget, the Government has proffered little further assistance to the SFC in meeting its increased obligations. The SFC has increased the only revenue stream that it has direct control over, the

Fire Service Contribution, which is paid by ratepayers through local council rates. Though of course, despite the increase in the Fire Service Contribution, along with further spending and capital expenditure cuts, the 2015-16 SFC net operating balance is projected to be a very large deficit. It is also expected in 2015-16 that the SFC will need to make borrowings to ensure its cash position does not fall below zero. The flow on effect of this is the commitment needed to service additional borrowings, forgoing that amount on other expenditure, as well as the need to pay back the loans.

This compromise of the SFC financial position is somewhat risky given the adverse situation Tasmania finds itself in terms of its risk factors and track record for fire outcomes. In the first instance Tasmania generally has a higher proportion of vulnerable persons than the national average, people who either find it difficult to prevent fires occurring or to escape their harm. Second, Tasmania is behind the national average in terms of the resources it gives to its fire service. Total expenditure on fire services on a per capita basis is below the national average, but the government contribution is very small, given that the main source of revenue for the SFC is the fire service contribution, coming from home owners. Tasmania has slightly below the national average career firefighters relative to population, but just above average volunteer firefighters, largely as a result of the 2013 Tasmanian bushfires where volunteer numbers increased. The fire service's response to fire is among the slowest in the country.

This is despite Tasmania having the highest incidence of fire relative to population and a higher than average fire death rate. It also has the highest insurance claims per person for fire events. Cook *et al.* (2012) performed a similar analysis and our results align closely with what they found, that Tasmania consists of a population at greater risk and experiencing relatively more fires, but having fewer resources to fight fires and less funding and subsequently achieving more negative results in terms of speed of response to fires and reducing loss of life and property.

The fire risk and outcome analysis shows Tasmania lags behind the rest of Australia in most areas. It is also found to not meet its own expectations in terms of performance targets, which is a further concern. Targets such as number of fires, number of false alarms and confinement of fires are all below stated targets. Other performance indicators don't have specific targets, which can make it difficult to assess the performance and needs of the fire service. Indeed a standard of fire cover, common in other jurisdictions, would provide Government with benchmark targets that would put the safety of people first, especially in times of a contractionary fiscal position, such as the one Tasmania found itself in for 2014-15.

Finally, while the prior analysis is helpful in seeing how resourced Tasmania is to deal with their fire situations, and how they respond, bushfire management may need greater resources than projected into the future if predictions of climate change effects come about. Despite Tasmania being cooler and wetter than the rest of Australia, recent evidence suggests it has seen large periods of below average rainfall with hotter temperatures, culminating in greater extreme fire weather days. Possible scenarios of climate change effects into the future will require a much greater firefighter to population ratio, than just allowing for increases in population.

In conclusion, the Tasmania Fire Service is in a precarious position in terms of being able to divert funding and resources to other non-fire related activities. Tasmania faces increased risks and experiences relatively bad fire outcomes and relies on the funding and resources it gets. Placing extra demands on the budget of the SFC means it can direct fewer funds to maintaining and improving the TFS. The new funding arrangements now covered by the SFC will result in either an unsustainable budget position for the SFC, or neglect of the upkeep and maintenance of the TFS.

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