

# EFFICIENCY AND EFFECTIVENESS OF ACT FIRE AND RESCUE: THE LATEST DATA

*A report for the United Firefighters Union,  
ACT Branch*



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16<sup>th</sup> February, 2020

# INTRODUCTION

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Each year the Productivity Commission publishes a lot of data on the efficiency and effectiveness of public services in its publication, *Report on Government Service Provision*. One component of this publication covers fire and rescue services.

The ACT Branch of the United Firefighters Union has commissioned me to provide a summary of this report and its associated data as they relate to the ACT fire and rescue services<sup>1</sup>.

## 2. Limitations

The quality of the data reported by the Productivity Commission depends on the states and territories providing accurate and comparable information.

The data should be interpreted with caution. Declining spending on fire services could be interpreted as a measure of increased efficiency. That is not necessarily true. This could simply mean that fire fighters are being paid less on average than the year before. Far more important are the trends in the relationships between real inputs and outputs, and whether these deliver the quality services expected from them as shown by for example the number of fires, their scale and the damage to life and property.

Also making things problematic is that the inputs, outputs and outcomes in fire services are not clearly separate nor easily measured. They are also affected by decisions and activity over which the fire services have no control. Climate change, combustible cladding in buildings, underspending by private citizens and companies on fire prevention and mitigation are all examples where the fire service has little control.

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<sup>1</sup> All the data in this report come from the Productivity Commission's 2019 Report on Government Services <https://www.pc.gov.au/research/ongoing/report-on-government-services> accessed on February 11, 2020. The data can be found here: <https://www.pc.gov.au/research/ongoing/report-on-government-services/2020/emergency-management/emergency-services/rogs-2020-partd-section9-data-tables.xlsx> (accessed on February 11, 2020)

The situation is particularly tricky in fire services, because while two components of activity — suppression and mitigation — are readily measurable, another arguably more important component — prevention — can be invisible. It could be argued that the most efficient and effective fire service is one that never fights a fire, because of their success in preventing them from happening in the first place!

With these important qualifications in mind, we now turn to the data.

## 2. Financial trends

Table 1 shows financial trends for ACT and Australia as a whole for three time periods: the 9 years to 2018/19, 5 years to 2018/19 and the last year.

The Table shows that over the last 9 years, the funding of fire services in the ACT has broadly been comparable with funding trends for Australia as a whole. Total revenues have increased slightly faster (26% compared to 24.3%), but revenues per capita (arguably a more important measure) increased slightly more slowly (8.3% compared to 9.5%).

Over the last five years, however, spending trends in the ACT have clearly been much less than Australia as a whole, with total revenues in the ACT increasing by 5.4% compared to 14.6% for Australia. Revenues per person in the ACT have declined in real terms by 4%, whereas they have increased by 6% for Australia as a whole.

**Table 1: Total revenues and revenues per person, fire services in the ACT compared to Australia as a whole, annual, 5 year and 9 year percentage changes.**

	<i>ACT (i)</i>			
2018-19		% change		
	\$	<i>Last year</i>	<i>9 year</i>	<i>5 years</i>
Total revenue (\$m)	70.8	-4.7%	26.0%	5.4%
Revenue per person (\$)	167.0	-6.5%	8.3%	-4.0%
	<i>Aust</i>			
		% change		
	\$	<i>Last year</i>	<i>9 year</i>	<i>5 years</i>
Total revenue (\$b)	4,464.1	6.4%	24.3%	14.6%
Revenue per person (\$)	177.3	4.7%	9.5%	6.0%

Source: Emergency Services for Fire and Other Events — Data Tables. Table 9A.1.

The previous discussion focussed on revenues. Now we turn to the major items of expense. Table 2 shows trends in expenses for salaries and total costs. Clearly the ACT has kept a lid on both types of expenses for all periods under consideration, with figures for Australia as a whole outstripping the ACT by a considerable margin. These expense data confirm the picture painted above: that the ACT's total fire service costs have been kept in check by keeping growth in wages and salaries low.

**Table 2: Expenses for fire services by major category, ACT and Australia as a whole, 2018/19, percentage change last year, 5 years and 9 years**

	Unit	ACT				Australia			
2018-19		percent change				percent change			
		Last year	9 years	5 years	Last year	9 years	5 years		
Labour costs - Salaries and payments	\$m	52.5	4.0%	10.1%	3.3%	2 666.8	11.5%	46.7%	33.9%
Total costs	\$m	88.3	-3.6%	13.1%	8.5%	4 949.3	12.8%	42.9%	25.3%

Source: Emergency Services for Fire and Other Events — Data Tables. Table 9A.13.

## 2. Human Resources

Table 3 shows data on the people who work in the fire services in the ACT and Australia as a whole. The Table shows that over the 9 years to 2018/19, the ACT's paid firefighter workforce has increased by 10.9%, almost half that of Australia as a whole (19.6%).

Over the last five years, the ACT's firefighting workforce has actually shrunk by almost 10% (9.2%), whereas Australia's has increased by almost 7% (6.8%). Over the last year, the ACT's firefighter workforce has shrunk by 6.3%, accounting for most of the decline that is evident over the last five years. By way of contrast, the Australia wide firefighter workforce has increased by 1.1%.

Over the last five years, the number of firefighters per 100,000 people in the ACT has fallen by a very large 17.2% compared to a 1.1% fall for Australia.

A rather different picture emerges when we focus on support staff numbers. ACT support staff numbers have grown much more rapidly than those for

Australia as a whole, both for the last 9 years (36.1% for the ACT and 21.3% for Australia) and the last 5 years (25.6% for the ACT compared to 11% for Australia as a whole).

Volunteer numbers for both the ACT and Australia have fallen over all of the time periods under consideration, with the ACT's volunteer workforce declining by 26.1% over the last five years, compared to 7.3% for Australia as a whole. The decline in volunteer numbers per 100,000 population is especially marked in the ACT, with a small 1.4% increase last year standing in contrast to the the 32.6% decline over the previous 5 years.

The ACT's position is in reality more perilous than is suggested by these data on the volunteer firefighter workforce. The Productivity Commission's numbers combine the Rural Fire Service Volunteers (RFS) and Community Fire Unit (CFU) Volunteers. The latter are described on the Emergency Services Agency's Website as:

“a team of local residents who live close to bush land areas across the ACT. These local volunteers are trained and equipped by ACT Fire & Rescue to safeguard their homes during a bushfire until the fire services arrive. CFU members are a part of ACT Fire & Rescue and take direction from ACTF&R Officers but they are not fire-fighters.”  
(<https://esa.act.gov.au/join-us/volunteering/community-fire-units>)

According to the Emergency Services Agency in 2019 there were 850 CFU and 450 RFS volunteers respectively. It is debatable as to whether the CFU members should be considered to be part of an effective volunteer service. Excluding them would reduce the reported number of volunteers per 100,000 people from 282.7 to less than 100 (96.5). This underscores the heavy reliance of the ACT on paid firefighters.

To summarise the story so far: the ACT has been spending less on its firefighter workforce over the last 5 years in particular, whereas Australia as a whole has seen increased expenditure. This has found its expression in a 10% fall to the paid firefighter workforce in the ACT compared to an almost 7% increase for Australia as a whole.

By way of contrast, support staff numbers in the ACT have increased by over a quarter over the last 5 years, and by over a third over the last 9. Support staff have been accounting for a progressively larger share of what is a shrinking ACT fire service total staffing pool.

Volunteer numbers have also been falling, both in the ACT and Australia. The decline in frontline firefighting resources has been occurring against the backdrop of the worst fire season on record, and longer term trends associated with climate change and the spread of flammable building materials.

**Table 3: Human Resources in the Fire Services, ACT and Australia, 2018/19 and percentage changes over the last year, the last 9 years and the last 5 years.**

		ACT				Australia			
				% change				% change	
2018-19	Unit		Last year	9 years	5 years		Last year	9 years	5 years
Firefighting workforce (FTE)									
Total	no.	326	-6.3%	10.9%	-9.2%	15817	1.1%	19.6%	6.8%
Support workforce	no.	113	3.7%	36.1%	25.6%	4 875	4.6%	21.3%	11.0%
Total	no.	439	-3.9%	16.4%	-2.2%	20 692	1.9%	19.8%	7.8%
Firefighting workforce (proportion of total)	%	74.3				76.4			
Firefighting workforce per 100 000 people (i)	rate	76.9	-8.0%	-6.4%	-17.2%	62.8	-0.5%	3.6%	-1.1%
Volunteers									
Firefighters	no.	1 198	3.3%	-2.4%	Na	152 798	-2.3%	-10.0%	
Support staff	no.	–			Na	54 647			
Total volunteer staff	no.	1 198	3.3%	-2.4%	-26.1%	207 445	-2.3%	-6.5%	-7.3%
Volunteers per 100 000 people (i)	rate	282.7	1.4%	-17.6%	-32.6%	823.8	-3.9%	-18.8%	-14.2%

Source: Emergency Services for Fire and Other Events — Data Tables. Table 9A.3.

Having considered data on funding and staffing, we now turn our attention to various measures of effectiveness.

### 3. Effectiveness: fire deaths and injuries

The number of structure fire-related deaths each year in the ACT is low, at between zero and 7, with zero the most likely number. This was in fact how many people died from structure fires in the ACT for the most recent year reported by the Productivity Commission (2018). Landscape fire deaths are even rarer. There were zero in 2018 also. The number of fire-related injuries

in the ACT is again low, most typically being around the mid-30s. In 2018 there were 38, giving an injury rate per 100,000 people of 9.1. This is much lower than for Australia as a whole (13.8), and this has been the case for the last five years. The ACT's firefighter effectiveness on these measures is high.

#### 4. Effectiveness: buildings

Confinement of fire to room of origin is one of the most well recognised measures of firefighting effectiveness. On this measure, the ACT performs around the middle of all the States and Territories and this has been so for the last 10 years. The ACT's performance improved slightly in 2018 compared to the previous year for accidental structure fires (76.2% compared to 76.7%), incendiary and suspicious fires (54.6% compared to 64.6%) and all other types of fires (52.2% compared to 53.3%).

As measured by the value of building and content insurance claims, the ACT is a strong performer (see Table 4). As the value of claims jumps around rather a lot from year to year, probably the best measure of performance is that the ACT consistently has claims per person below the value for that of Australia as a whole.

**Table 4: Building and contents insurance fire claims per 100,000 population, ACT and Australia, 2009/10-2018/19**

		<i>Unit</i>	<i>ACT</i>	<i>Aust</i>
Total value of claims per person in the population (i)				
	2018-19	\$	16.62	22.62
	2017-18	\$	13.56	23.71
	2016-17	\$	12.84	23.36
	2015-16	\$	15.44	26.76
	2014-15	\$	6.89	21.48
	2013-14	\$	11.74	20.69
	2012-13	\$	9.63	22.02
	2011-12	\$	16.28	20.83
	2010-11	\$	10.58	19.14
	2009-10	\$	11.55	18.28

Source: Emergency Services for Fire and Other Events — Data Tables. Table 9A.7.

In summary, the data on effectiveness show the ACT fire service to be performing relatively well as measured by the low number of annual deaths and injuries, confinement of fires to room of origin and also the value of building and content fire related claims per 100,000 population.

## **5. Efficiency**

The single most widely used measure of fire service efficiency is the time taken to get to a fire.

Care must be taken in interpreting this measure, because travel times are clearly a product of congestion, the time of call out, the reliability of vehicles, the ease of getting a fire truck to the building that is on fire, and so on.

Response times by jurisdiction are shown in Table 5, for major cities only (for comparability reasons). The NT and Tasmania have been excluded because they do not collect this data. The Table shows response times for the 50<sup>th</sup> or middle percentile (one hundredth) of call-outs. The ACT is consistently one of the better performers: for cities, it ranks third behind Victoria and NSW, a similar position it held the previous year when the response time at the 50<sup>th</sup> percentile was also 7.1 minutes. An even more impressive picture emerges when response times are measured at the 90<sup>th</sup> percentile, with the ACT reducing its response time from 11.3 to 10.5 minutes, and improving its ranking to second of all jurisdictions, with only Victoria at 9 minutes ahead of it.

**Table 5: Response times by jurisdiction including call taking time, 50<sup>th</sup> and 90<sup>th</sup> percentiles, 2009/10-2018/19, major cities (mins)**

		50th percentile						
		Unit	NSW	Vic (d)	Qld (e)	WA (f)	SA (g)	ACT (i)
Major cities								
Response times								
	2018-19	min.	6.9	6.3	8.0	9.0	7.5	7.1
	2017-18	min.	6.3	6.5	7.9	8.0	7.5	7.1
	2016-17	min.	6.3	6.5	7.9	8.0	7.8	6.8
	2015-16	min.	6.8	6.4	7.9	8.0	7.7	6.7
	2014-15	min.	6.5	6.4	7.4	8.1	7.2	7.0
	2013-14	min.	7.1	6.4	7.4	8.1	na	7.2
	2012-13	min.	7.2	6.4	7.3	7.9	na	6.9
	2011-12	min.	7.5	6.4	7.2	8.0	na	7.6
	2010-11	min.	7.4	6.4	7.3	7.9	na	7.4
	2009-10	min.	7.4	6.6	7.6	7.8	na	7.0
		90th percentile						
	2018-19	min.	11.1	9.0	11.9	12.8	11.0	10.5
	2017-18	min.	9.5	9.2	11.7	11.2	11.1	11.3
	2016-17	min.	9.5	9.2	11.7	11.4	11.1	10.5
	2015-16	min.	10.4	9.1	11.5	11.6	10.8	10.2
	2014-15	min.	10.6	9.1	11.5	11.5	9.9	11.0
	2013-14	min.	11.4	9.0	11.4	11.3	na	10.4
	2012-13	min.	11.6	9.1	10.9	11.5	na	10.5
	2011-12	min.	11.5	9.0	10.5	11.6	na	11.6
	2010-11	min.	11.5	9.0	12.1	11.3	na	10.7
	2009-10	min.	11.2	9.2	11.6	11.6	na	11.3

Source: Emergency Services for Fire and Other Events — Data Tables. Table 9A.11

In summary, the available data show the ACT fire service to be relatively efficient and if anything it has become more efficient in the latest year for which data are available.

## 6. Conclusion

This report has summarised the latest fire services data published by the Productivity Commission. The data show that the ACT has been cutting funding to its fire service and has been doing so for five years now. This

stands in contrast to the fire services in Australia as a whole, which have been experiencing increased funding.

The main way the ACT fire service has managed to cut expenditure is by reducing the number of paid, professional firefighters, which has fallen by 10% over the last 5 years, and by over 6% in the last year alone. This situation has been accompanied by falls in the number of volunteers, which have fallen by more than a quarter over the last five years, and by over one third as measured by volunteers per 100,000 population. This is almost certainly a generous portrait as these numbers include Community Fire Unit Volunteers, who are defined as not being “firefighters”.

Despite these tougher times financially and staffing, the ACT continues to punch above its weight as measure by effectiveness and efficiency measures.

The question left unanswered by these data is how the ACT has managed to keep costs down, yet efficiency and effectiveness has been impressive? It is difficult to tell from the Productivity Commission’s data. However, they do show that the ACT has experienced a rather large increase in firefighter attrition, from 2.9% in 2014/15, to 5.5% in 2017/18 and 4.4% in 2018/19. In 2014/15, the ACT’s attrition rate was 1.5 percentage points below the figure for Australia as a whole. It is now 0.6 percentage points higher.

We suspect part of the answer lies with increased overtime and the stress this brings with it, leading to experienced firefighters leaving the service prematurely. Labour costs can be kept in check, but at the expense of the health and well-being of the workforce and the longer term sustainability of ACT Fire and Rescue.