DRAFT REPORT

Efficient operating costs of providing Fire and Rescue NSW's services

Prepared for
IPART

14 December 2021

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Summary

False Automatic Fire Alarm (AFA)

False AFAs represent a significant resourcing cost for FRNSW, with 47 656 AFA incidents in 2019-20, of which 98 per cent were a result of a false activation.

Most of the costs associated with AFAs are from the 'active' time. Inclusive of the time the alarm was assigned to a crew to the point when they return back to their stations (or onto another service).

The average response duration per false AFA incident is 42 minutes in total (combined time of all trucks responding), with nearly all incidents finalised within an hour, and 99 per cent finalised within 2 hours. In alignment with FRNSW policy, the average number of trucks responding is 2 (however responses from 1 truck are possible outside of metro areas)

Table 1 summarises each of the incremental costs associated with these incidents.

1 Cost of responding to false AFAs

	Staff	Truck variable	Truck fixed	Admin and billing	Response coordination	Overheads	Total cost (incl. overheads)
	$	$	$	$	$	$	$
Per incident	286	20	5	31	32	54	429

Source: The CIE, FRNSW.

With the current false AFA fee being $1 600, the fee is not reflective of the actual cost incurred by FRNSW. This is because the charge is not based on a cost recovery methodology. As outlined on FRNSW's webpage, the charge is intended to motivate building owners and managers to be continually pro-active in managing their AFA systems and to ensure they are properly maintained.

AFA management fees

AFA management charges are the second largest proportion of self-generated revenue for FRNSW, at $10.3 million a year on average. A summary of the current charges and the estimated costs are outlined below in table 2.

2 AFA management fees summary

Fee	Current charge	Charge frequency	Cost estimate
	$		$
Alarm installation and monitoring			
First Connection	256	Per event	665
Second and Subsequent Connections	128	Per event	665
Ongoing monitoring fee for first installation	57.50 (690 per year)	Monthly	72.19 (per year)
Ongoing monitoring fee for second and subsequent installations	28.75 (345 per year)	Monthly	72.19 (per year)
Transfer first installation between AFASPs	128	Per event	143
Transfer second and subsequent installation between AFASPs	64	Per event	143
New AFASP application			
Application Fee	58 239	Initial/once off	Unknown – charge not applied
Maintenance			
First Year	51 716	Annual	50 000
Second and Subsequent Years	12 929	Quarterly	12 500
Testing			
Additional Service Fee	83.90	Per event	Unknown – charge not applied
Retesting Fee	1 549.00	Retesting Fee (third and subsequent tests)	Unknown – charge not applied

Source: FRNSW, CIE

Many of the AFA management fees are not cost reflective. For instance:

- connection fees are not sufficient to cover the Brigade Exercise needed to travel and assess new premises
- charging lower fees for second and subsequent AFA connections (for new connections, transfers, and monitoring fees) is not cost reflective, as FRNSW's tasks and activities remain the same as an initial connection
- the testing fees appear to be outdated, and no longer used by FRNSW, and
- the quarterly maintenance fee does not the relative market share or the relative cost across the service providers.

The most significant difference between the current fee and the cost was for ongoing monitoring fees. The estimated cost per connection is $72 per year, compared to the current charge of $690 per year for the first connection and $345 per year for the second and subsequent.

HAZMAT

HAZMAT services have been defined as either a 'wires down' or an 'other' HAZMAT services.

Like false AFAs, the costs of HAZMAT services are predominately driven by the incident response time and the number of trucks (and as a result staff) that attend. However, the key difference is that administration and billing is more admin intensive for HAZMAT services. Consumables and equipment used are also charged, at cost plus 10 per cent margin.

The average time per truck is 55 minutes for wires down services and 52 minutes for other HAZMAT services. 73 per cent of wires down services and 80 per cent of other HAZMAT services are 60 minutes or less.

Each HAZMAT truck has a different cost depending on the crew size, as shown in table 3.

3 Vehicle cost by crew type

	Vehicle examples	Average cost per hour
4 crew vehicles	Standard pumper and HAZMAT pumper	$606
2 crew vehicles	Other Hazmat vehicles, decontamination shelter and the Mobile Command Centre	$338
1 crew vehicles	Special operations vehicle	$244

Source: CIE.

Some HAZMAT incidents require a significant number of FRNSW's trucks and consumables and can span across multiple days. Because of this, charging per truck is expected to be the most cost reflective method.

Since staffing time is the most significant cost driver for both wires down and other HAZMAT services (75 per cent and 64 per cent respectively), the charge for specific trucks should be based on the resourcing requirements for each truck.

Built environment

The current charging structure for FRNSW's fire safety in built environment services:

- uses a mix of charging types (e.g. flat rate, hourly or daily charges) that are not related to cost drivers
- sets different charges for services which comprise similar activities and staffing hours
- does not include recover costs of all activities involved, such as administration, risk assessment, travel, reporting.
- is ambiguous as to whether charges for certain services (e.g. FFSRs) are per hour, or per person per hour.
- should be simplified to a consistent set of charges to reflect the efficient costs incurred by FRNSW.

An average of 39 per cent of the Fire Safety Branch's total costs were recovered from charges over the four years between 2018 and 2021 (table 4).

4 Overall cost recovery rate

	Unit	2017	2018	2019	2020	2021	Average
Total OPEX	$'000	6 230	6 242	6 921	7 732	7 442	7 084
Total Revenue	$'000	NA	2 367	3 026	3 324	2 316	2 758
Overall cost recovery rate	**Per cent**	**NA**	**38**	**44**	**43**	**31**	**39**

[a] NA for data that is not available.

Source: CIE based on data provided by FRNSW.

The average revenue per service (between 2018 and 2021) does not reflect the average cost per service incurred by FRNSW (table 5).

5 Differences between average revenue and average costs for chargeable services

Monopoly service with specified charge	Current basis for charge	Average revenue per service	Average cost per service[a]	Reasons for differences
		$	$	
Initial Fire Safety Report	Based on cost of development	11 396	5 244	▪ Cost of development is not a cost driver for IFSR ▪ Cost drivers are: – length and complexity of report – number of performance solutions
Final Fire Safety Report	Two-tiered hourly rate plus Cat 2 assessment fee	1 089	2 023	▪ Two-tiered hourly rate recovers cost of travel and inspection time. ▪ Cost of admin, risk assessment, preparatory work and reporting are not currently recovered.
Fire Safety System Report	Hourly charge based on rank of staff member	671	2 023	▪ Hourly charge recovers cost of travel and inspection time. ▪ Cost of admin, risk assessment, preparatory work and reporting are not currently recovered.
Attendance at fire safety meeting	Hourly charge for meeting time	659	1 647	▪ Hourly charge recovers cost of travel and meeting time. ▪ Cost of admin, risk assessment, prep work, and follow-up are not currently recovered.
Provision of advisory, assessment or consultancy services	Daily rate	2 704 (FEBQ)	1 290 (FEBQ) 5 134 (Other AAC service)	▪ Not clear what current daily charge of $2600 was based on and what activities are included and for which staff grades. ▪ FEBQs have set application form and are distinct from other AAC services. ▪ A separate charge for FEBQs is required

[a] Based on current staff costs per hour.

Source: CIE.

FRNSW provide (or intend to provide) the following additional monopoly services for which charges are not specified:

- providing comment to consent and regulatory authorities
- reactive compliance checks
- proactive compliance
- issuing an order following a compliance check
- lodgements of emergency plans.

Fixed and variable charges based on current costs

For the majority of its services, FRNSW conducts a risk assessment on all applications received. Services are completed based on the risk assessment and staffing availability. For example, on average 9 per cent of IFSR applications received per year are assessed and reported on by FRNSW.

Current charges only apply where a service is completed by FRNSW. As such administration and risk assessment costs incurred by FRNSW are not recovered for applications that are received and assessed, but not processed beyond the risk assessment stage.

Three potential charging structures based on average costs for each service are outlined below:

- fixed charge per application to recover administration and risk assessment costs — for applications received by FRNSW which are not processed beyond the risk assessment stage (table 6)
- fixed charge to recover the full cost incurred by FRNSW for completion of a service (table 7)
- combination of fixed and variable charges to recover the full cost, for service types which are considered to have high variation in staff requirements (table 9).

6 Administration and risk assessment costs – based on fixed cost per application

Service type	Admin and risk assessment	Cost of service overheads	Total
	$/application	$/application	$/application
Initial fire safety report	134	116	250
Final fire safety report	138	116	254
Fire safety system report	138	116	254
Attendance at a fire safety meeting associated with development	110	116	226
Advisory, assessment or consultancy services (including other requests for report and excluding FEBQs)	96	116	212
FEBQs (potentially new charging category)	181	116	298
General inspection	138	116	254

Service type	Admin and risk assessment	Cost of service overheads	Total
	$/application	$/application	$/application
Providing comment to consent and regulatory authorities	72	38	110
Reactive compliance check	136	38	174
Proactive compliance	136	38	174
Reactive/Proactive compliance - Order issued	72	38	110
Lodgements of Emergency Plans	96	6	102

Source: CIE estimates based on information provided by FRNSW.

7 Full cost of service — based on fixed cost per application

Service type	Staff cost Admin/risk assessment	Cost of service overheads	Staff cost Excl. admin/risk assessment	Total
	$/service	$/service	$/service	$/service
Initial fire safety report	134	116	5 111	5 361
Final fire safety report	138	116	1 885	2 139
Fire safety system report	138	116	1 885	2 139
Attendance at a fire safety meeting associated with development	110	116	1 537	1 763
Advisory, assessment or consultancy services (including other requests for report and excluding FEBQs)	96	116	5 038	5 250
FEBQs (potentially new charging category)	181	116	1 108	1 406
General inspection	138	116	1 205	1 458
Providing comment to consent and regulatory authorities	72	38	1 397	1 507
Reactive compliance check	136	38	1 576	1 751
Proactive compliance	136	38	1 576	1 751
Reactive/Proactive compliance - Order issued	72	38	1 024	1 134
Lodgements of Emergency Plans	96	6	192	293

Source: CIE estimates based on information provided by FRNSW.

Staffing hours for certain services provided by FRNSW are highly variable, namely IFSR and other AAC services, with variation driven by:

- length of reports (ranging between 50 to 500 pages), and
- complexity of building and issues
- number of performance solutions (ranging from 1 solution to 20 or 30) (table 8).

These variations are not systematic making it difficult to assign a different charge based on risk classification, building class or another distinguishing category.

FRNSW's staffing hours are less variable for other services, such as final fire safety reports and fire safety system reports, with the exception of travel time and a lower degree of variation in complexity of building and issues.

8 Degree of variation in staffing hours by service

Monopoly service	Degree of variation	Factors causing variation
Charge currently specified in FB Regulation		
Initial Fire Safety Report	High	▪ Report length ▪ Complexity of building and issues ▪ Number of performance solutions
Final Fire Safety Report	Low	▪ Travel time ▪ Complexity of building and issues
Fire Safety System Report	Low	▪ Travel time ▪ Complexity of building and issues
Attendance at fire safety meeting	Medium	▪ Travel time ▪ Meeting duration
FEBQ	Medium	▪ Report length ▪ Complexity of building and issues ▪ Number of performance solutions
Provision of other advisory, assessment or consultancy (non FEBQ) services	High	▪ Report length ▪ Complexity of building and issues ▪ Number of performance solutions
General inspection	Low	▪ Travel time ▪ Complexity of building and issues
No charge currently specified in FB Regulation		
Providing comment to consent and regulatory authorities	Low	▪ Travel time ▪ Complexity of building and issues
Reactive compliance (assessing fire safety complaints)	Low	▪ Travel time ▪ Complexity of building and issues
Proactive compliance audits of fire safety	Low	▪ Travel time ▪ Complexity of building and issues
Issuing a compliance order	Low	▪ Travel time ▪ Complexity of building and issues
Lodgement of Emergency Plan	Low	▪ Length & complexity of Emergency Plan

Source: CIE.

9 Full cost of service — based on combination of fixed and variable charges for service types with high variation

Service type	Staff cost Admin/risk assessment	Cost of service overheads	Total fixed	Staff cost (excl. Admin/risk assessment)
	Fixed $/service	Fixed $/service	Fixed $/service	Variable $/hour/staff
Initial fire safety report	134	116	250	140
Provision of other advisory, assessment or consultancy (non FEBQ) services	96	116	212	140

Source: CIE estimates based on information provided by FRNSW.

Event charges

FRNSW can charge for attendance at events, such as the Royal Easter Show, musical festivals and sporting events, under Schedule Part 1 of the Fire Brigade Regulations 2014.

The regulations indicate that FRNSW can charge for staff time, purchase or hire of goods and services and consumables. This appears to indicate that no charges could be levied for use of trucks, as is currently the practice.

The number of events that FRNSW has historically attended is very low — 11 in 2017, 17 in 2018, 23 in 2019 and 13 in 2020. For these events, attendance is typically between 3 and 8 hours, but can be for periods of more than 1 day.

Revenue collected from events is also a very minor component of FRNSW revenue, and has been less than $300 000 per year since 2017.

Since the charging policy indicates that FRNSW charges only for attendance, the charges do not cover the full cost to FRNSW. For instance, there are various pre- and post-event activities not included, such as pre-event planning and preparation time (which can be considerable for large events), administrative time and travel expenses and time.

From a pure incremental or avoidable cost perspective, attendance at an event may have limited cost, because staff would otherwise have been at the station. It is not clear if staff and equipment can be used for fires outside of the event if they are at an event.

Because of the variability in the type and length of events FRNSW attends, the appropriate approach to charging is to levy a per hour charge. These costs should be consistent to those set out for Hazmat incidents and false AFAs, depending on the crew at the event. Charges should also include the costs of planning and administration to ensure that the full cost is recovered.

2 Introduction

Role of FRNSW

FRNSW's core responsibility is for responding to emergencies involving fire, and other dangerous situations like motor vehicle accidents, in prescribed 'fire districts'. These core services are not charged, and are funded by insurers of property, local councils, and NSW taxpayers via the Emergency Services Levy (ESL).

A wide range of other services are also provided to community members, other government agencies, property and business owners, and others. These services include:

- attending incidents involving hazardous materials, to make them safe and investigate causes
- advising on and approving fire safety provisions in building developments. This includes conducting compliance inspections, providing fire safety reports, attending fire safety meetings; or any other service as required to meet statutory fire safety requirements.
- providing training and consulting services
- assisting other emergency services and State and Federal agencies, including the Rural Fire Service, Ambulance NSW, Police NSW, and the Australian Defence Force
- managing Automatic Fire Alarm (AFA) systems with contracted providers, including connections and testing, and
- attending major events and provides services for media productions

Some of these services are charged, while others are not.

FRNSW's current fees and charges

Some of FRNSW's non-core services already have user charges (either prescribed by the *Fire Brigades Regulation 201*4 or set at FRNSW's discretion) and others do not.

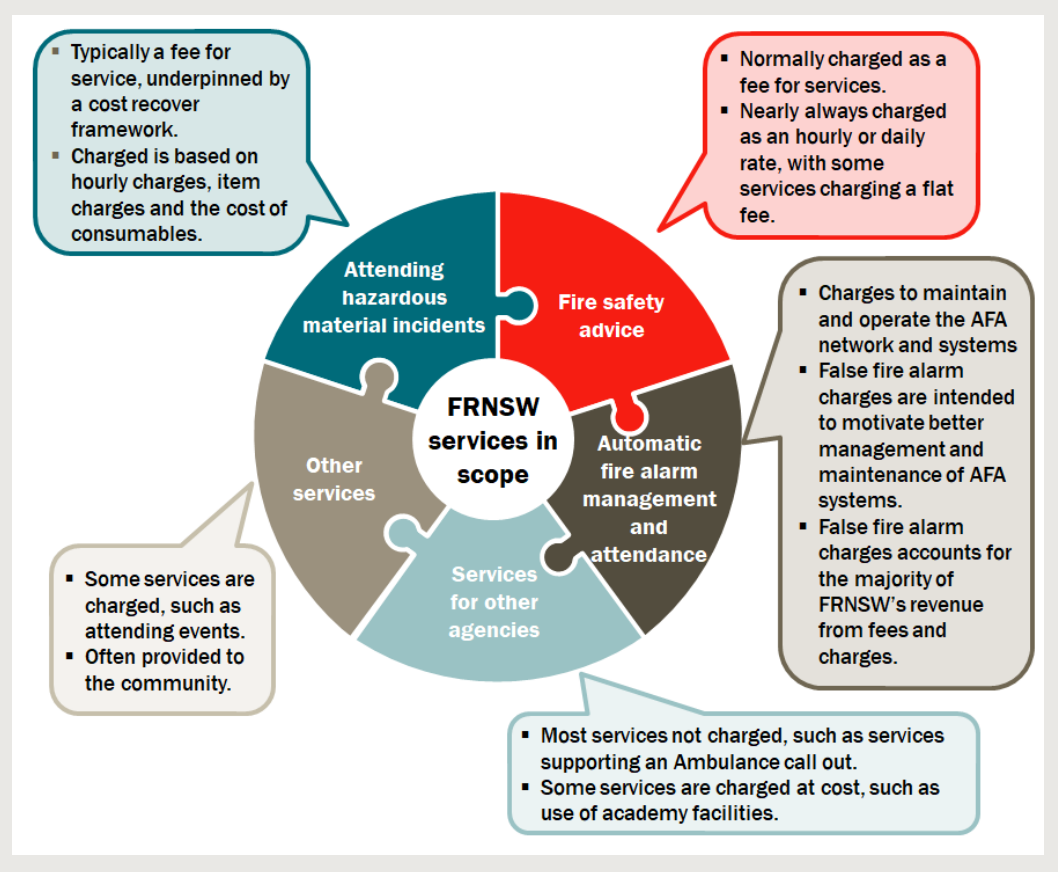
When fees are charged, fees generally fall within three groups:

- a fee for service which is cost recovery based (such as attending hazmat incidents)
- a fee for service which are generally based on staff time (such as building code assessments), and
- others that are charged per service (such as dispatch services which are provided to RFS and SES).

However, many services are provided without a charge. For example, attending community events, consultation services for various workplaces, and many others.

A summary of FRNSW's services and their charge type is provided in chart 2.1 below.

2.1 Summary of FRNSW's services and charge types



Data source: Adapted from IPART, 2021, Review of Fire and Rescue NSW's fees and charges: Issues Paper, and Fire Brigades Regulation 2014.

FRNSW can only charge for specified services as set out in the *Fire and Rescue Act* and the specified amounts set out in the *Fire Brigades Regulation 2014*. For example, *Fire Brigades Regulation 2014* legislates that $1 600 is the charge for responding to a false-alarm callout.[1] FRNSW has no flexibility to charge for new services that they introduce (with the exception of service categories specified at section 42 of the Act), nor can they vary the charges.

FRNSW can also charge for services that can be provided by other providers. These include training, consultancy, and providing personnel for events. FRNSW delivers these services via a Registered Training Organisation. FRNSW provides these services in a commercial, competitive market and is subject to competitive neutrality requirements.

Many of FRNSW's charges have remained unchanged for many years, while FRNSW has experienced an increase in operating costs over time (mostly driven by increased labour expenses). It is possible that many of the current charges no longer reflect an efficient operating cost, and some services that may be suitable to apply a cost recovery charge are not currently able to do so.

A complete list of FRNSW charges is set out in table 4.1.

1 Except in the course of a test of which prior notice was given, and if it is the second or subsequent false alarm during any period of 60 days.

2.2 Current FRNSW charges

Service provided	Method for charging	Charges
Automatic false alarm	Per incident	$1600
Hazmat incident	Based on time	Cost per hour of: ▪ Each standard pumper = $423.00 ▪ Each hazmat pumper = $423.00 ▪ Each hazmat vehicle other than a hazmat pumper = $286.00 ▪ Each hazmat delta decontamination shelter = $286.00 ▪ Each special operations response vehicle = $286.00 ▪ Each boat (including a trailer and vehicle to tow it) = $286.00 ▪ Each helicopter = $3,300.00 ▪ Each incident command vehicle = $275.00 ▪ Each hose = $55.00 ▪ Each fully encapsulated gas suit = $275.00 ▪ Each spillage suit = $55.00 ▪ Each self-contained breathing apparatus = $55.00 ▪ Each standard gas detector = $55.00 ▪ Each unit of specialised detection equipment = $110.00
Initial fire safety report	As a share of the cost of a development	<$250 000 = $500 charge $250 001 - $500 000 = $500 +$0.40 per $1000 above $250 000 $500 001 - $1000 000 = $600 +$0.30 per $1000 above $500 000 $1000 001 - $10m = $750 + $0.20 per $1000 above $1m Above $10m = $2550 + $0.10 per $1000 above $10m
Assessment of a category 2 fire safety provision	Per assessment	$180
Final fire safety report	Based on resourcing	$215 for initial inspection (first two hours) plus $200 for each additional hour (or part), including travelling time. $430 for any re-inspection (first two hours) plus $200 for each additional hour (or part), including travelling time.
Fire safety system report. These charges are also applied to 'Other services'	Based on hours and rank of member of fire brigade	Cost per hour of: ▪ Fire safety engineer = $200 ▪ Chief Superintendent = $132 ▪ Building surveyor = $132 ▪ Engineer = $130 ▪ Fire safety manager = $125 ▪ Superintendent = $121 ▪ Fire safety team leader = $110 ▪ Inspector = $99 ▪ Fire safety officer = $90 ▪ Station commander or captain = $83 ▪ Firefighter = $66

Service provided	Method for charging	Charges
Meeting	Based on time	$200 per hour per fire brigade member
Written report	Based on time	$2600 for each day (or part) spent by a fire brigade member providing advisory, assessment or consultancy services in respect of State significant infrastructure, Crown building work, or other development.
Event charges	Based on time in attendance at an event	Cost per hour of: ▪ Fire safety engineer = $200 ▪ Chief Superintendent = $132 ▪ Building surveyor = $132 ▪ Engineer = $130 ▪ Fire safety manager = $125 ▪ Superintendent = $121 ▪ Fire safety team leader = $110 ▪ Inspector = $99 ▪ Fire safety officer = $90 ▪ Station commander or captain = $83 ▪ Firefighter = $66 ▪ Each standard pumper = $423.00 ▪ Each hazmat pumper = $423.00 ▪ Each hazmat vehicle other than a hazmat pumper = $286.00 ▪ Each hazmat delta decontamination shelter = $286.00 ▪ Each special operations response vehicle = $286.00 ▪ Each boat (including a trailer and vehicle to tow it) = $286.00 ▪ Each helicopter = $3,300.00 ▪ Each incident command vehicle = $275.00

Source: FRNSW website, accessed October 2021, https://www.fire.nsw.gov.au/page.php?id=9168.

Scope of this review

With the *Fire Brigades Regulation 2014* due for statutory repeal, there is an opportunity to review FRNSW's charging model to identify the most appropriate pricing framework for charges and identify additional services that should be subject to charges.

It is our understanding that this report will support this by:

- reviewing, estimating, and reporting on the efficient operating cost of services that are currently chargeable. These services were identified in the Scope of Works document as fire safety services in the built environment, hazardous material incident responses, attending fires outside fire districts, attending automatic fire alarm call-outs that are false alarms, and attendance at major and special events
- of these chargeable services, identifying and forecasting cost drivers (and their efficient cost) and providing a methodology for reviewing and adjusting prices in the future.

This will ensure that FRNSW's fees remain reflective of efficient costs over the next 5 years, and

- ensure that the charging structure provides the flexibility and scalability so that new/future services can be easily applicable.

The findings from this review will enable FRNSW to allocate its resources more effectively, which would unlock more services/benefits to the community and provide incentives for other stakeholders to better manage their own risk (such as employ better fire alarm maintenance to prevent false alarms).

Structure of this report

This report continues as follows:

- Chapter 3 sets out how efficiency is defined for FRNSW and what can and cannot be assessed for efficiency. In large part, decisions about FRNSW charges reflect whether an avoidable cost or fully distributed cost approach is used.
- Chapter 4 sets out the findings with respect to automatic false alarms
- Chapter 5 set out the findings in respect to automatic fire alarms management fees
- Chapter 6 sets out the findings with respect to HAZMAT incidents
- Chapter 7 sets out the findings with respect to the built environment services
- Chapter 8 sets out the findings for other services

3 Defining efficiency for FRNSW

FRNSW provides a range of services, some of which are not charged and some of which are. The approach to allocating its costs across different services will be an important driver of any charges. This chapter steps through the logic behind charges for government services, and the different approaches for considering cost allocation and efficiency for FRNSW.

Setting charges for government services

Funding public services

Government services can be funded through taxation revenue, or through some form of cost recovery on a competitively neutral basis.

Core services provided by FRNSW, such as responding to emergencies involving fire and other dangerous situations like motor vehicle accidents, is a broad public benefit. FRNSW is predominantly funded (around 90% of its revenue each year) by the Emergency Services Levy (ESL). The ESL's total amount is based on FRNSW's approved budget each year. It is charged to three groups, with the proportion each pays set by legislation:

- NSW property insurance holders (73.7 per cent)
- Local councils which have a fire station located in their 'fire district' (11.7 per cent)
- NSW consolidated fund (14.6 per cent).[2]

However, there are a range of other non-core services provided by FRNSW that are potentially appropriate for a cost-recovery funding model.

If well designed, cost recovery is an efficient way of funding regulatory services. Cost recovery can:

- improve efficiency — a fee or charge can force economic agents to take into account the cost of operating the regulatory framework in making their economic decisions, leading to a more efficient allocation of resources
- improves equity — a fee or charge can ensure that the users or beneficiaries of the service pay for it, rather than general taxpayers, who may not use or benefit from it
- reduces the call on general taxation revenue — all taxes have efficiency costs. Funding services through an efficient cost recovery arrangement can reduce the burden on general taxpayers and minimise the associated efficiency losses, and

2 IPART, 2021, *Review of Fire and Rescue NSW's fees and charges: Issues Paper,* page 11.

- instil cost consciousness in regulatory agencies — cost recovery arrangements can improve the transparency of regulators and make them more accountable to users of the regulatory system.

On the other hand, poorly designed cost recovery arrangements could potentially:

- reduce economic efficiency — where fees and charges are not closely linked to costs, they effectively act like a narrowly based tax on particular activities, which are typically less efficient than more broadly based general taxes
- impose unnecessarily high administration costs — some cost recovery arrangements are administratively cumbersome. In some circumstances, the administrative costs on government and business (or the community) may outweigh any efficiency gains, particularly if minimal revenue is collected
- compromise policy objectives — in some cases, a poorly designed cost recovery arrangement could compromise the achievement of government objectives.

The Australian Government's policy in relation to cost recovery is that:

> "…where appropriate, non-government recipients of specific government activities should be charged some or all of the costs of those activities. The cost recovery policy promotes consistent, transparent and accountable charging for government activities and supports the proper use of public resources."[3]

The framework for designing, implementing and reviewing cost recovery arrangements for activities provided on behalf of the Australian Government is set out in the Department of Finance's *Cost Recovery Guidelines*. Key elements of a best practice cost recovery arrangement include the following.

- The user charge reflects the 'efficient cost' of providing the service (where the Australian Government Cost Recovery Guidelines define efficient costs as the minimum costs necessary to provide the activity, while achieving the government's desired policy outcomes and legislative functions).[4]
- The cost recovery mechanism should provide the right incentives to both the regulators and the regulated entities.
- The cost recovery mechanism should be simple and transparent.

The NSW Government also has some publicly available guidance on cost recovery, although this is quite dated. It notes that:

> the efficient allocation of resources will be achieved if the prices charged for goods and services at least cover their avoidable cost. If an entity could earn revenue equal to or in excess of its avoidable costs it would not impose any costs on any noncommercial activities of the agency.[5]

For a business unit of a general government sector agency, the guidance discusses avoidable costs (as set out above) and fully distributed costs. The fully distributed cost

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3 Australian Government Department of Finance, *Australian Government Cost Recovery Guidelines*, Resource Management Guide No. 304, July 2014 – Third edition, p. 5.

4 Department of Finance, *Australian Government Cost Recovery Guidelines*, Resource Management Guide No. 304, July 2014 — Third edition, p. 34.

5 NSW Treasury 2001, *Guidelines for pricing of user charges,* Policy and Guidelines Paper TPP 02-02, p. 15, https://arp.nsw.gov.au/tpp01-02-guidelines-pricing-user-charges/.

comprises all direct commercial costs and a share of the agency's overheads and capital costs. This guidance indicates that charges should at least cover avoidable costs but could cover as much as the fully distributed cost. It also notes that issues related to capacity will mean that the fully distributed cost will be substantially higher than avoidable costs.

What does efficiency mean?

Three central aspects underpin the efficiency concept – technical (or productive) efficiency, allocative efficiency and dynamic efficiency.

- Technical efficiency is when a service provider delivers a given set of services for the lowest possible cost. In the context of FRNSW services, examples of technical efficiency metrics include the labour time per AFA incident. A pure measure of technical efficiency relates the outputs to input quantities, such as labour hours or units of capital. It is also possible to relate the outputs to input costs, such as labour costs per AFA incident.
- Allocative efficiency, in the context of FRNSW services, is where services and the standard of service are socially efficient. That is, the marginal benefits of the service exceeds the marginal costs. If FRNSW services were charged below the marginal cost, then it would be possible that there is allocative inefficiency, because people do not appropriately account for FRNSW costs. For example, there may be insufficient investment by fire alarm providers in their systems if false alarms had no charge. It could also be possible that the marginal cost to FRNSW is different to the marginal cost to society as a whole. Ideally, allocative efficiency would account for the marginal social cost to society as a whole. For example, if charges for Hazmat incidents were set at the marginal cost to FRNSW, which then led to people not calling in incidents because they would be charged, then this could lead to an inefficient outcome because of the social costs relating to the incident.
- Dynamic Efficiency is where the FRNSW faces appropriate incentives for investing in and innovating their service delivery approach and for improving efficiency over time. Over the longer term, it is dynamic efficiency that is the most important economically. Charges that are fixed per activity will tend to promote dynamic efficiency more than charges that are per hour, because the latter would not provide incentives for FRNSW to be more efficient in its use of time.

Cost reflective vs efficient charges

There can be differences between a charge that reflects costs and an efficient charge. This can be because:

- the costs incurred by a provider of a government service are not as low as they could be (i.e. are not technically efficient). This could be because of the way the service is managed or because of the overarching requirements set by governments in relation to the service
- there are externalities in relation to the use of a service, so that the costs incurred do not reflect the full costs and benefits to society.

In most instances, understanding current actual costs to develop a cost reflective charge is a starting point, and any adjustments related to efficiency are subsequently made to this.

Average cost vs incremental costs

An efficient charge will typically reflect the incremental or marginal costs related to providing a service. That is, if this service was not provided, by how much could the costs of the provider be reduced.

For the types of services provided by government, there tends to be high fixed costs. For example, FRNSW has a high cost related to providing capacity for responding to fires, water providers have high fixed costs of water infrastructure and transport providers have high fixed cost of transport infrastructure. This means that the incremental cost will be much lower than the average cost.

In some cases, the incremental cost is considered to be different in the short term versus the long term. For example, over a long period, costs related to new infrastructure to address increasing demand might be factored in through a long run marginal cost approach.

What is efficiency for FRNSW?

The issues above are highly relevant for FRNSW.

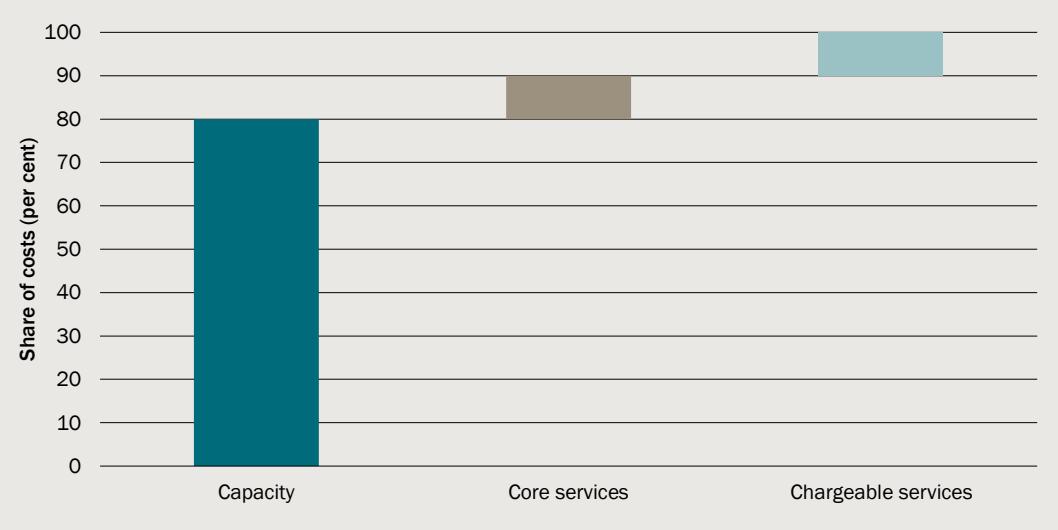
- FRNSW has a set of assets and service requirements related to its role to respond to fires and other incidents rapidly. For example, its buildings, pumpers and staffing are heavily driven by the need to have a capability.
- The incremental costs related to services for which its charges are substantially less than average costs, because of the high degree of fixed costs.
- Prices for chargeable services can have allocative efficiency implications because prices that are too low will lead to inefficient investment by others (particularly with respect to fire alarms) and prices that are too high could deter people from notifying incidents for which they would be charged and which have negative impacts on others.
- The technical efficiency of FRNSW —providing the services at the least cost — is heavily influenced by policy decisions such as number of trucks and staff sent to an incident.

These issues are discussed in detail below.

Capacity of FRNSW response teams

As would be expected for an emergency services response agency, a large part of FRNSW time and cost is related to ensuring there is capacity should an incident occur. As an illustrative example, 80 per cent of time and cost is related to providing capacity in chart 3.1, 10 per cent is allocated to core services and 10 per cent to chargeable services.

3.1 Allocating time and costs to capacity versus activities



Note: Illustrative only.

Source: CIE.

Practically, nearly all of FRNSW costs for operational/response teams could be considered as related to capacity. That is:

- the costs related to buildings (capital and maintenance) are driven by capacity
- the capital costs related to pumpers are driven by capacity
- the labour costs for staff, except for 'retained' workers who are called in for specific activities are driven by capacity
- the overhead costs, which relate to management of the above assets and staff, are therefore also largely driven by capacity.

In terms of chargeable services, the main exception is services for the built environment. This service does not sit within the broader role of FRNSW to provide capability to respond to emergencies.

Pure incremental costs of chargeable services

Under a 'pure' approach to incremental costs, the approach is to understand by how much costs for FRNSW would fall, if the chargeable services were not provided. Under this approach, the incremental costs included are shown in table 3.2. This also shows the cost items not included.

3.2 Costs included and not included in a pure incremental approach

	Included	Not included
Time costs for full time staff (and on-costs) for incident		✗
Time costs for full time staff (and on-costs) for providing standby capacity		✗
Time costs for retained staff (and on-costs) and for staff not required without chargeable service	✓	

	Included	Not included
Depreciation/other costs for trucks related to distance	✓	
Depreciation/other costs for trucks related to time spent on activity		×
Depreciation/other costs for trucks related to providing standby capacity		×
Consumables used in incident (including fuel)	✓	
Corporate overheads linked to pure incremental costs	✓	
Corporate overheads linked to costs related to activity		×
Corporate overheads related to standby capacity		×
Administrative time/cost	✓	
Costs for buildings (capital/depreciation, utilities and maintenance)		×

Source: CIE.

The pure incremental approach is based on there being sufficient capacity that chargeable activities do not lead to a need for additional staff, trucks etc. It also implicitly assumes that undertaking the chargeable services does not reduce the ability do undertake non-chargeable services — for example, firefighters sent to a building that turns out to be a false alarm does not lead to any reductions in the ability to respond to another incident. It means that the incremental cost is actually less than the direct time allocated to undertaking the activity.

In our view, the pure incremental approach is likely to result in costs that are too low, because it does not reflect that there is an opportunity cost to the time spent undertaking chargeable activities.

Modified incremental costs of chargeable services

A modified incremental approach would include the direct time allocated to the chargeable activities and capital costs and corporate overheads based on the share of time allocated to chargeable activities (table 3.3).

3.3 Costs included and not included in a modified incremental approach

	Included	Not included
Time costs for full time staff (and on-costs) for incident	✓	
Time costs for full time staff (and on-costs) for providing standby capacity		×
Time costs for retained staff (and on-costs) and for staff not required without chargeable service	✓	
Depreciation/other costs for trucks related to distance	✓	
Depreciation/other costs for trucks related to time spent on activity	✓	
Depreciation/other costs for trucks related to providing standby capacity		×
Consumables used in incident (including fuel)	✓	

	Included	Not included
Corporate overheads linked to pure incremental costs	✓	
Corporate overheads linked to costs related to activity	✓	
Corporate overheads related to standby capacity		✗
Administrative time/cost	✓	
Costs for buildings (capital/depreciation, utilities and maintenance)	Share based on modified incremental costs share	

Source: CIE.

Because this approach accounts for the opportunity cost of time spent undertaking chargeable (or non-core) activities, in our view, it is the most appropriate costing approach for false AFAs, HAZMAT services, attendance at events, and AFA management fees with clearly identifiable staff activities and tasks (such as new connections and transfer fees).

Fully distributed cost approach

A fully distributed cost approach divides the total costs across actual time spent at incidents (both chargeable and non-chargeable). This effectively allocates a part of the capacity or standby costs to all chargeable and non-chargeable activities. The costs allocated to chargeable activities in this case are shown in table 3.4.

3.4 Costs included and not included in a fully distributed cost approach

	Included	Not included
Time costs for full time staff (and on-costs) for incident	✓	
Time costs for full time staff (and on-costs) for providing standby capacity	✓	
Time costs for retained staff (and on-costs) and for staff not required without chargeable service	✓	
Depreciation/other costs for trucks related to distance	✓	
Depreciation/other costs for trucks related to time spent on activity	✓	
Depreciation/other costs for trucks related to providing standby capacity	✓	
Consumables used in incident (including fuel)	✓	
Corporate overheads linked to pure incremental costs	✓	
Corporate overheads linked to costs related to activity	✓	
Corporate overheads related to standby capacity	✓	
Administrative time/cost	✓	
Costs for buildings (capital/depreciation, utilities and maintenance)	Share based on average costs share	

Source: CIE.

This approach has been applied to those services that have a clearly identified team with shared capacity across multiple services or activities. This ensures that the full staffing cost is captured. For example, this includes AFA monitoring fees and services provided in the built environment. Unlike the AFA and HAZMAT response crews, the AFA monitoring and built environment teams operate without standby capacity and therefore the fully distributed cost approach is a true reflection of the cost of delivering these services.

Recommended approach

The primary approach taken for each service is summarised in table 3.5.

3.5 Approach applied to each service area

		False AFA	AFA Management fees (new connections and transfers)	AFA Management fees (monitoring fees)	HAZMAT	Built environment	Event charges
	Summary of approach	Modified incremental	Modified incremental	Fully distributed	Modified incremental	Fully distributed	Modified incremental
Staff costs	Time costs for full time staff (and on-costs) for incident/activity	✓	✓	✓	✓	✓	✓
Staff costs	Time costs for full time staff (and on-costs) for providing standby capacity	×	×	N/A	×	N/A	×
Staff costs	Time costs for retained staff (and on-costs) and for staff not required without chargeable service	✓	✓(Brigade cost for new connections)	N/A	✓	N/A	✓
Truck costs and consumables	Depreciation/other costs for trucks related to distance	✓	✓(Brigade cost for new connections)	N/A	✓	N/A	✓
Truck costs and consumables	Depreciation/other costs for trucks related to time spent on activity	✓	✓(Brigade cost for new connections)	N/A	✓	N/A	✓
Truck costs and consumables	Depreciation/other costs for trucks related to providing standby capacity	×	×	N/A	×	N/A	×
Truck costs and consumables	Consumables used in incident (including fuel)	✓	✓(Brigade cost for new connections)	N/A	✓	N/A	✓

Overheads and administration	Corporate overheads linked to pure incremental costs	✓	✓	N/A	✓	N/A	✓
	Corporate overheads linked to costs related to activity	✓	✓	✓	✓	✓	✓
	Corporate overheads related to standby capacity	✗	✗	N/A	✗	N/A	✗
	Administrative time/cost	✓	✓(Brigade cost for new connections)	✓	✓	✓	✓
	Costs for buildings (capital/depreciation, utilities and maintenance)	✓	✓	✓	✓	✓	✓

Source: CIE.

For false AFAs and HAZMAT services, the fully distributed costs approach is also shown as a comparator, which results in very high estimates of costs for these chargeable services.

Behavioural considerations to charges

Charges may lead to responses that are efficient or inefficient. If a charge leads others to undertake activities that reduce the likelihood of the event and therefore the need for the cost, then that is an efficient response to a charge, as long as the charge is set to cover incremental costs. However, if a charge leads to avoidance of reporting of incidents that have broader social or environmental consequences, then that could be an inefficient response. Examples of efficient and inefficient responses are shown in table 3.6.

3.6 Behavioural consequences of incremental cost based charges

Type of charge	Efficient response	Inefficient response
HAZMAT charge	Undertake activities that reduce the risk of a HAZMAT incident	Avoid reporting a HAZMAT incident
AFA charge	Undertake activities that reduce the likelihood of AFAs	Undertake activities that also reduce the likelihood of alarms where there is a fire
Events	Do not seek attendance at events where there is little risk of needing FRNSW services	Avoid FRNSW attendance at events where there is risk of needing FRNSW services
Built Environment	Provide high quality information for rapid assessment.	Not submitting a report for input from FRNSW.

Source: CIE.

FRNSW currently manages these types of responses through policy decisions about which incidents to charge for and through regulatory arrangements that require particular

activities (and ensure these cannot be avoided). This appears sensible and hence we have not factored behavioural considerations into the consideration of efficient charges.

Dynamic efficiency and charging for FRNSW

As noted earlier in this chapter, user charges can instil cost consciousness in regulatory agencies. This can occur when users can more effectively argue about costs than general government processes. In this case, cost consciousness can translate into dynamic efficiency gains.

The structure of charges can also influence the incentives for FRNSW to find efficiency gains.

- A fixed charge per incident ensures that there is an incentive for FRNSW to minimise their resourcing requirements for the activity
- An hourly charge does not provide an incentive for FRNSW to minimise their resourcing requirements for the activity
- A consumables charge does not provide an incentive for FRNSW to minimise their resourcing requirements for the activity

This suggests that where possible, fixed incident charges should be applied. The exception is where incidents are highly varied in their resourcing requirements, and having more varied charges per incident provides a clearer incentive for people engaged in higher risk areas to undertake higher levels of their own costs to avoid incidents.

Methodology to review the efficiency of FRNSW services

In large part, this study is focused on estimating modified incremental costs associated with FRNSW activities. Where the modified incremental cost approach was not possible, a fully distributed approach has been adopted. This is an assessment of the actual costs rather than an assessment of whether these costs are efficient. To undertake this process we have:

- obtained data on the time spent and costs directly allocated to chargeable services
- allocated wages and on-costs based on award wages for FRNSW employees
- allocated vehicle costs based on the share of time a vehicle is used for chargeable activities
- allocated overheads and building expenses based on costs allocated above as a share of overall FRNSW costs.

As a comparator the fully distributed cost approach has also been estimated, based on FRNSW allocations of costs across chargeable and non-chargeable activities.

There are a variety of efficiency lens' which may be used to consider whether the actual costs are efficient and which have been employed in this report.

- Where there is variation in inputs across activities that are expected to be fairly similar across fire districts, this has been examined to consider whether there is evidence that the average inputs are inefficient.

- Where there are benchmarks from other states, these have been considered.
- Where there are alternative mechanisms for providing a service, such as retained staff or full-time staff, this has been considered. However, we have not made adjustments at this stage on the basis that while use of retained staff may appear inefficient from a modified incremental approach applied to chargeable services this is likely to be efficient from the perspective of FRNSW more broadly.

There are a number of aspects of efficiency that are not being reviewed.

- the wage rates and cost of other inputs such as pumpers are not being reviewed
- the level of capacity across FRNSW in general, and whether this is the appropriate level of capacity to meet FRNSW objectives, is not being reviewed — this impacts on the average cost approach only
- the decisions about the number of trucks attending an incident and staffing levels of each truck are not being reviewed — this is considered a policy decision for FRNSW.

Regulatory and other standards

FRNSW has its own legislation, operates within the award wage for permanent and retained firefighters in NSW[6] and has a range of other standards that it has set as part of standard operational guidelines. These guide the way that FRNSW operates and influence the costs associated with chargeable services. These are taken as given for the purposes of the assessment in this report.

Were FRNSW to undertake a full efficiency assessment including of core services, then consideration would need to be given to these aspects of operations, as well as the trade-offs between available capacity and emergence response.

6 https://fbeu.net/resources/wages-conditions/current-awards/

4 Automatic false alarms

Automatic Fire Alarm (AFA) systems are an important component in fire detection for buildings and premises, since they are designed to inform people and elicit prompt FRNSW responses in the event of a fire.

However, false fire alarms impose a resource cost on FRNSW and the public by:

- requiring FRNSW resources (trucks and firefighters) to attend false fire alarms. This can have a direct cost related to the use of these resources, as well as limiting FRNSW staff and emergency response vehicles that could be used to respond to genuine fires or emergencies
- disrupting and creating potential safety concerns for general population with fire trucks travelling through streets, and
- desensitises residents to the sound of the alarm.

The social cost of false AFAs is very high, with one study in NSW estimating that the social cost is $246 million per annum.[7]

Although emergency fire responses are funded by the Emergency Service Levy, FRNSW are able to charge AFA service providers (AFASPs) for responding to false activation of automatic fire alarms.

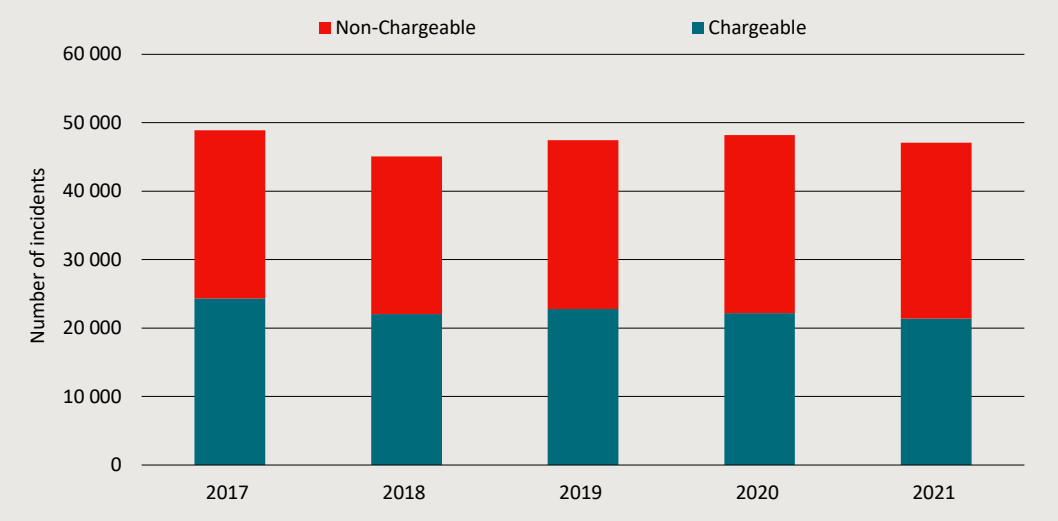
Charges for false AFAs have been in place since 1989, established under the Fire and Rescue NSW ACT 1989 Section 42. The current charge for false AFAs was set in 2016 at $1 600 per incident through an ammendment to the Fire Brigades Regulation 2014, which saw an increase from the $1 250 fee charged in 2014.

Number of services and revenue received

Table 4.1 shows the total number of false AFA attendances in the last 5 year. The total number of false AFAs in NSW is high, with an average of more than 47 000 per annum since 2017 (chart 4.1). These have also been identified by false alarms that are eligible for a charge or non-chargeable.

7 Tannous W. Kathy, 2020, The Economic Cost of Unwanted Automatic Fire Alarms: Final Report, Western Sydney University

4.1 Total Number of Automatic False Fire Alarms



Data source: FRNSW.

FRNSW responds to activations of fire alarms by sending a response crew to investigate the situation and inform back to the station. Stop codes or radio codes for AFAs are used by the Incident Commander to send a stop message to FireCOM at the conclusion of an AFA-reported incident. FireCOM enters the code into ESCAD, which then automatically sends it to the Australian Incident Reporting System (AIRS).[8]

There are 33 stop codes in total. Each stop code provides information about the reason for the AFA activation and inform whether a FRNSW call out should or could be charged or not. For example, the stop code "100" relates to actual fire events and are not chargeable since it is covered under the Emergency Services Levy (ESL).

A full list of FRNSW's stop codes are provided in table 4.2.

4.2 Stop Codes identified by which AFA activity is "Chargeable" and "Not Chargeable" and Cause of Activation

Code	Description	Chargeable?	Cause
0	Default in FireCAD	NOT CHARGEABLE	
100	An actual fire reported by the activation of an AFA detection or fire sprinkler system	NOT CHARGEABLE	
700	False alarm or false call; insufficient information to classify further	NOT CHARGEABLE	
702	Alarm operated due to extreme weather conditions - storm conditions, lightning, thunder, heat, etc	NOT CHARGEABLE	External
706	Council or water supply authority causes pressure fluctuation through mains system	NOT CHARGEABLE	External
707	Alarm operated due to power surge/spike or short circuit	NOT CHARGEABLE	External

[8] FRNSW Statement of guideline

Code	Description	Chargeable?	Cause
711	Malicious false alarm- includes malicious activation of Break Glass Alarm or Manual Control Point	CHARGEABLE	Human
731	Sprinkler suspected malfunction - eg loss of pressure and equipment faults	CHARGEABLE	System
732	Smoke detector malfunction monitored by fire service	CHARGEABLE	System
733	Heat detector malfunction monitored by fire service	CHARGEABLE	System
734	Sprinkler suspected malfunction - includes water pressure loss and equipment fault	NOT CHARGEABLE	
735	Smoke detector malfunction proprietary monitored	NOT CHARGEABLE	
736	Heat detector malfunction	NOT CHARGEABLE	
738	Alarm system suspected malfunction - includes fault in wiring, alarm panel, inadequate maintenance	CHARGEABLE	System
739	Alarm system suspected malfunction - not classified above	NOT CHARGEABLE	
745	False alarms generated from a non-AFASP monitored system - domestic and residential premises	CHARGEABLE	
746	False alarms generated from a non-AFASP monitored system- commercial premises	CHARGEABLE	
751	Smoke detector operated - no fire - smoke from other location	NOT CHARGEABLE	External
752	Heat detector operated - no fire - heat from other location	CHARGEABLE	System
754	Smoke detector operated- no fire- smoke from other location- internal smoke	NOT CHARGEABLE	
755	Smoke detector operated- no fire- smoke from other location- external smoke	NOT CHARGEABLE	
756	Cooking fumes - toast, foodstuffs, etc	CHARGEABLE	Human
758	Simulated conditions - incense, candles, sparklers, smoke machine, etc	CHARGEABLE	Human
759	Simulated conditions - no fire; not classified above	NOT CHARGEABLE	
762	Accidental operation of alarm - includes activation of Break Glass Alarm or Manual Control Point	NOT CHARGEABLE	Human
763	Failure to notify of test	NOT CHARGEABLE	
764	Incorrect test by service company personnel	CHARGEABLE	Human
765	Alarm activation due to workers/occupiers activities	CHARGEABLE	Human
766	Alarm activation due to poor building maintenance - dust, cobwebs, insects, etc	CHARGEABLE	Human
767	Alarm activation due to aerosol use - hair spray, insecticides, etc	CHARGEABLE	Human
768	Alarm Activation due to steam - shower bath sauna, steam room etc	CHARGEABLE	Human

Code	Description	Chargeable?	Cause
772	Fire Indicator Panel active, Alarm Signalling Equipment not activated	CHARGEABLE	Human
773	Fire Indicator Panel not active (includes system reset before arrival), Alarm Signalling Equipment activated	CHARGEABLE	Human

Source: FRNSW.

When a charge is made, FRNSW invoices the AFASP (Automatic Fire Alarm Service Provider) who later recovers the costs from their customers. Most human and system induced false AFA activations are eligible for a charge.

However, not all false AFA activations are charged. This includes certain circumstances when false alarms are beyond the control of the owner or system arrangement, or when external causes of false AFAs (such as a dust storm or bushfires) set off the alarm.

There are also some clearly defined grounds for leniencies, such as:

- the first false alarm within a 60 day period will not be charged. However, subsequent false alarms within the 60 day period are chargeable.
- a 24 hour leniency period applies in which repeat false alarms will not be charged. Only the first alarm will be charged within the 24 hours.

There may also be instances where a chargeable false AFA incident can be waived at the discretion of FRNSW or a case by case assesment of the circumstance based on financial or non-financial needs. Waiver or reduction of charges are based on Section 43 of the Fire Brigades Act 1989. FRNSW officers attending incidents do not have authority to waive unwanted alarm charges. However, the Commissioner may, at his or her discretion waive any charge payable or reduce any such charge by a proportion as they deem fit with regard to[9]:

- a person's contribution (whether by payment of local government rates or insurance premiums or otherwise) to the cost of fire brigade operations, and
- such other matters as the Commissioner considers relevant.

For waivers, FRNSW processes and refunds the AFA service providers (AFASPs), and the service providers pay back their customer.[10]

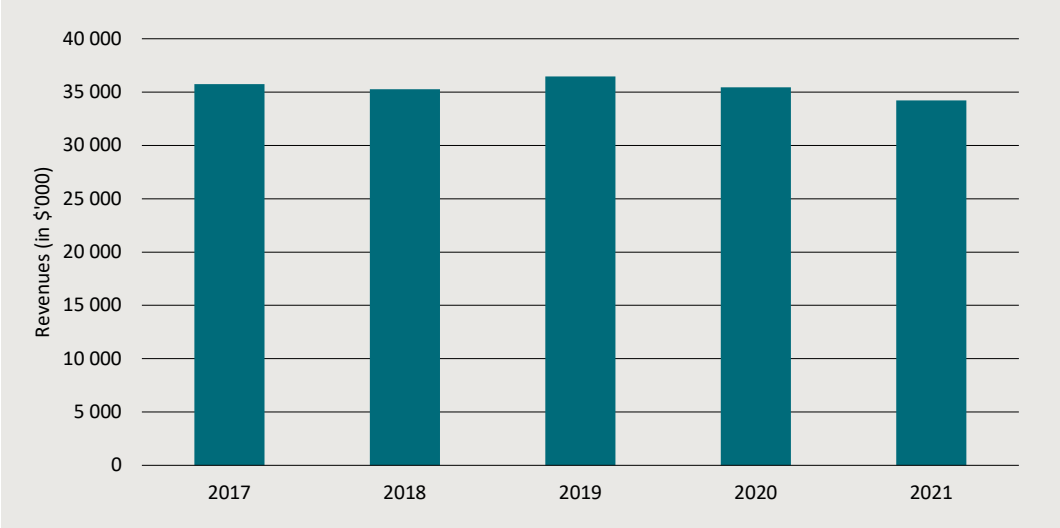
The false AFA fee is designed to encourage building owners and managers to be proactive in maintaining their AFA systems. This is to reduce the number of false activations and to ensure the system is working appropiately.

The largest share of non-ESL revenue received by FRNSW comes from charging false AFA incidents. This revenue has been approximately $35 million per year from 2017 to 2021 (chart 4.3).

9 Fire and Rescue NSW Act 1989, section 43. See, https://legislation.nsw.gov.au/view/html/inforce/2021-03-26/act-1989-192#sec.43

10 Consultation with FRNSW (22 Sept 2021) – Meeting on false alarms with FRNSW

4.3 Revenue from charging for False AFA responses



Data source: FRNSW.

FRNSW expectation is that revenue from false alarms incidents will remain consistent, at approximately $35 million per annum over the next 5 years.[11]

Cost drivers

False AFA cost drivers have been estimated based on the modified incremental approach. This approach accounts for the opportunity cost of time spent undertaking chargeable (or non-core) activities.

Table 4.4 below summarises each of the cost drivers. The sum of these costs indicates the estimated incremental cost for each false AFA truck and incident.

4.4 Average cost of False Alarms

	Staff	Truck variable	Truck fixed	Admin and billing	Response coordination	Overheads	Total cost	Total cost per hour
	$	$	$	$	$	$	$	$
per resource	176	13	3	16	15	32	255	594
per incident	286	20	5	31	32	54	429	998

Source: CIE.

Operational Guidelines

The number of trucks responding to attend the fire alarms is predetermined under FRNSW's operational guidelines.

[11] Based on forecast from IPART Information Request to FRNSW

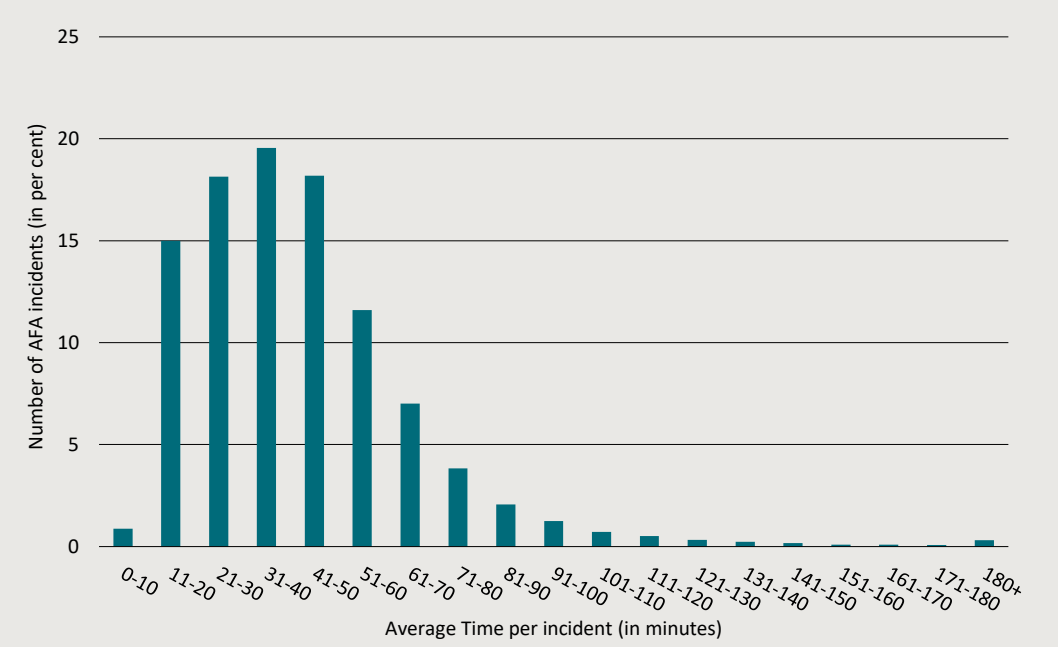
According to the standard operational policy, FRNSW has 2 trucks assigned for each AFA call out. If the AFA activation is repeated within 24 hours, FRNSW can reduce the number of vehicles responding to 1 truck. This is the standard response for the metro areas within the fire district.

Incident duration

The total time to respond to a false AFA will influence both the incremental cost for staff and trucks. Staffing costs are directly related to the total incident duration (including travel time) for the service, while truck costs stem from increased depreciation and consumables, such as petrol and tyre usage.

The incident duration for nearly all false AFA incidents with an average response team of 2 trucks and 8 personnel is under one hour. For instance, 83.3 per cent of responses to false alarm activations are 60 minutes or less (chart 4.5). Therefore, if there are 2 trucks responding to false alarms and each take less than 30 minutes then the combined duration is within an hour.

4.5 Combined false AFA duration per incident (includes all responding trucks)



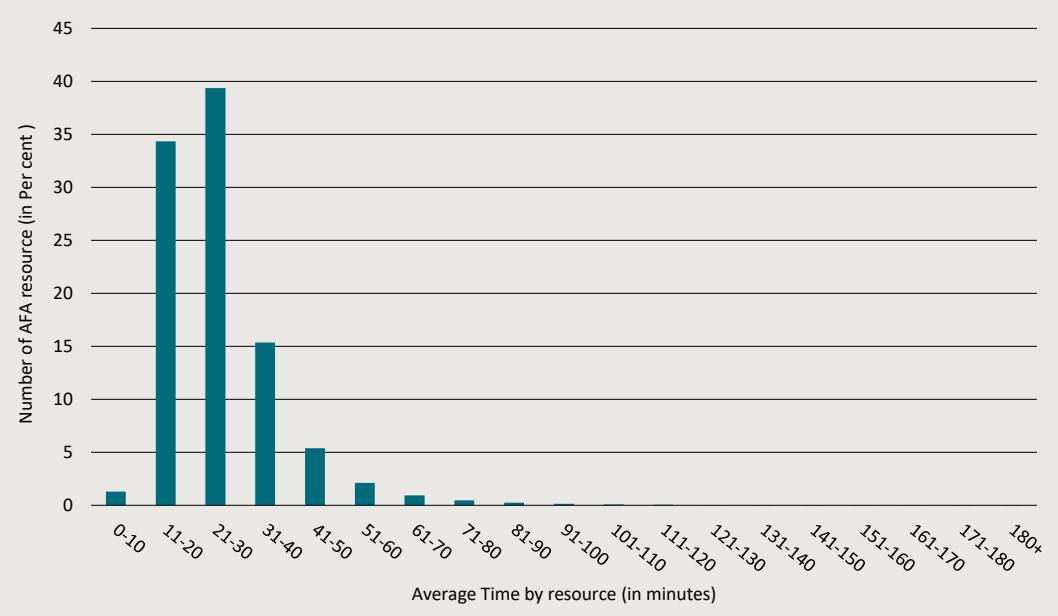
Note: inclusive of the estimated time to return back to the fire station.

Data source: CIE and FRNSW.

The average duration per incident is 42 minutes for all false AFA incidents serviced by FRNSW. Nearly all false AFA activations are finalised under an hour and almost 99 per cent incidents are finalised within 2 hours.

The average time per truck is approximately 26 minutes (chart 4.6). It should be noted that the standard call out response can vary between 1 or 2 trucks depending on location of the false alarm or if it is a subsequent alarm in 24 hours, and therefore estimated average total time is not double of the average incident time per truck.

4.6 False AFA average incident time per truck



Note: inclusive of the estimated time to return back to the fire station.

Data source: CIE and ESCAD, FRNSW.

These average incident duration result in the following incremental costs for FRNSW.

4.7 Costs driven by incident time

	Marginal staff cost	Marginal truck variable cost	Marginal truck fixed cost
	$	$	$
Per resource (truck)	176	13	3
Per incident	286	20	5

Source: FRNSW, CIE.

Composition of response team

FRNSW fire stations consist of either full time fire fighters or retained staff. Depending on the composition of the team, the costs for FRNSW will be different. The cost of full-time staff reflects their salary (plus oncosts), while retained staff incur a 'call out' charge with a minimum of 2 hours paid to the staff members.

This impacts the incremental cost to respond to false AFA. Given, that most trucks responding to a false alarm take approximately 30 minutes, the staffing cost of a truck manned by full time staff would include only the 30 minutes, while a retained crew could cost 2 hours of wages for each of the crew members. Because of this, involvement of retained crews result in a higher incremental staffing cost than crew members with full time staff. Use of retained crew can be more efficient in terms of FRNSW's total costs.

This is because the retained staff have zero standby time, as they are only called and paid as needed (plus their annual retainer).

Truck costs

The cost is affected by the number of trucks that respond to an incident. This is primarily due to the increased staffing costs, as FRNSW's operating requirements specify the amount of personnel per truck (typically four staff). However, there are also increased truck variable and fixed costs, although these expenses are minor in comparison to the staffing costs.

On average, false AFAs have 1.97 trucks attending to an incident. This is in line with the standard operational response policy for AFA incidents..

Administration and billing

FRNSW invoices the AFASP, which in turn invoices building owners or managers. Given there are only 3 AFASP in operation in NSW, the billing and related administrative tasks for false AFAs are straightforward and have been streamlined.

It is estimated that there is on average of 15 minutes for administration related tasks and billing activities for each false AFA incident. Table 4.8 the estimated administrative/billing cost for FRNSW for false AFAs.

4.8 Estimated administrative/billing cost for FRNSW for false AFAs

	Average Admin Cost
	$
Per resource (truck)	$16
Per incident	$31

Source: CIE.

However, there is a potential for this administration and billing cost to be double counting costs captured in the AFA management chapter below. Further consultation and stakeholder input is needed to confirm this cost.

Response coordination

The Operational Communications team manages the system that assigns resources to emergency incidents (including false AFAs and HAZMAT) attended by FRNSW, the NSW Rural Fire Service, and the NSW State Emergency Service. In 2021-22 there were 112 FTE employed in the Operational Communications team, with an annual staffing cost of $17.2 million for the year (including on costs). Two Communication Centres are operated by firefighters and administrative officers, operating 24 hours a day.

Once the Operational Communications team receives an incident call or alarm, a staff member assigns available response teams with the quickest estimated response time and monitors the incident throughout its full duration (i.e. until the crew/truck is available to

respond to another incident). The cost of this staff member has been included, as outlined in table 4.9.

4.9 Estimated response coordination cost for FRNSW for false AFAs

	Average response coordination cost
	$
Per resource (truck)	$15
Per incident	$32

Source: CIE.

Overheads and depreciation

Based on the FRNSW allocation of operating costs to corporate overheads, a percentage of the labour and operating costs of Corporate Services Division and Governance and Legal Regulatory Services have been added to the total cost of each AFA call out of 6.9 per cent.

A depreciation overhead has also been added to account for the building, computers, and other equipment (4.5 per cent) and a maintenance cost has been included to account for building, computers, communications, and other general maintenance costs (3.0 per cent). This is based on estimation of the proportion of depreciation and maintenance cost to total cost.

Training

All FRNSW response teams are equipped to respond to fire events and emergencies. There are no specific training requirements for false AFAs. Because of this no additional or specific training costs above the standard training expenses have been identified.

Premise type and class

Table 4.10 identifies the class types as assigned by the Australian Building Codes Board.

4.10 Premise class

Premise Class	Description
Class 1	▪ **Class 1a** — A single dwelling being a detached house, or one or more attached dwellings, each being a building, separated by a fire-resisting wall, including a row house, terrace house, townhouse or villa unit. ▪ **Class 1b** — A boarding house, guest house, hostel or the like with a total area of all floors not exceeding 300m2, and where not more than 12 reside, and is not located above or below another dwelling or another Class of building other than a private garage.
Class 2	A building containing 2 or more sole-occupancy units each being a separate dwelling.
Class 3	A residential building, other than a Class 1 or 2 building, which is a commonplace of long term or transient living for a number of unrelated persons. Example: boarding-house, hostel, backpackers accommodation or residential part of a hotel, motel, school or detention centre.

Class 4	A Class 4 part of a building is a sole dwelling or residence within a building of a non-residential nature. A dwelling in a building that is Class 5, 6, 7, 8 or 9 if it is the only dwelling in the building.
Class 5	An office building used for professional or commercial purposes, excluding buildings of Class 6, 7, 8 or 9.
Class 6	Class 6 buildings are typically shops, restaurants and cafés. They are a place for the sale of retail goods, or the supply of services direct to the public.
Class 7	▪ **Class 7a** — A building which is a car park. ▪ **Class 7b** — A building which is for storage or display of goods or produce for sale by wholesale.
Class 8	A building in which a handicraft or process for the production, assembling, altering, repairing, packing, finishing or cleaning of goods or produce is carried on for trade, sale or gain.
Class 9	A building of a public nature. ▪ **Class 9a** — A health care building, including those parts of the building set aside as a laboratory. ▪ **Class 9b** — An assembly building in which people may gather for social, theatrical, political, religious or civil purposes, including schools, universities, childcare centres, pre-schools, sports facilities, night clubs or public transport buildings. ▪ **Class 9c** — An aged care building.
Class 10	A non-habitable building or structure. ▪ **Class 10a** — A private garage, carport, shed or the like. ▪ **Class 10b** — A structure being a fence, mast, antenna, retaining or free standing wall, swimming pool or the like. ▪ **Class 10c** — A private bushfire shelter.

Source: Australian Building Codes Board, https://www.abcb.gov.au/sites/default/files/resources/2020//UTNCC_Building_classifications.PDF

Specific premise classes or types have longer incident times, resulting in higher associated costs for FRNSW. This is because of the 'complexity' of the building. For example, a building may be more complex if it has a larger number of alarms or multiple buildings, such as hospitals, aged care facilities, and some commercial buildings. Table 4.11 shows the costs driven by premise class.

4.11 Average Cost per incident by Premise Class

Class Type	Count	Average time per truck	Average cost per incident (incl. overheads)	Average cost per incident per hour (incl. overheads)
		min	$/incident	$/hour
Class 1	46	27.05	443	982
Class 1A	36	25.45	409	965
Class 1B	32	24.04	417	1,040
Class 2	16 312	23.93	374	939
Class 3	10 754	24.15	409	1 017
Class 4	4	33.37	559	1 005
Class 5	9 909	24.71	384	932

Class 6	7 123	27.28	463	1 018
Class 7	123	26.35	410	934
Class 7A	154	27.18	406	897
Class 7B	6 382	31.13	482	930
Class 8	1 483	34.25	524	917
Class 9A	5 868	25.89	498	1 155
Class 9B	11 333	26.19	448	1 026
Class 9C	5 400	25.02	473	1 135
Class 10A	26	23.21	366	946
Class 10B	5	44.16	503	683

Source: FRNSW, CIE.

Table 4.12 lists the top 5 premise types according to highest cost per incident and table 4.13 lists the lists the bottom 5 premise types according to lowest cost per incident.

4.12 Highest average cost per incident by premise type (top 5)

Premise type	Average time per truck	Average cost	Average cost per hour	Total average cost (incl. overheads)	Average cost per hour (incl. overheads)	Proportion of false AFA calls
	min	$/incident	$/hour	$/incident	$ per hour	per cent
Tunnels – Road	31.3	484	928	554	1 062	0.09
Large Manufacturers	29.2	478	983	547	1 125	0.11
Electricity Substations	37.1	490	792	560	906	0.59
Airports	30.6	460	901	527	1 031	0.21
Prisons	29.7	4532	915	518	1 047	1.80

Source: FRNSW, CIE.

4.13 Lowest average cost per incident by premise type (bottom 5)

Premise Type	Average time per truck	Average cost	Average cost per hour	Total average cost (incl. overheads)	Average cost per hour (incl. overheads)	Proportion of false AFA calls
	min	$/incident	$/hour	$/incident	$ per hour	per cent
Offices	24.7	335	814	383	932	12.85
Apartments	24.0	328	820	375	939	21.23
Hotels/Motels	21.4	322	902	369	1 033	6.89
Backpackers	19.2	300	938	343	1 073	0.60
Hospitality	23.5	293	750	336	858	0.43

Source: FRNSW, CIE.

The average cost for the most costly premise types is $541 per incident whereas average cost for the least costly premise type (bottom 5) is $361 per incident (including

overheads). The premise types with the highest costs also involve greater incident durations (average of 31.6 minutes per truck) compared to the lowest cost premise types where the incident time averages 22.7 minutes per truck. There is approximately a 9 minute difference per truck. The average cost to attend to false alarm for the least expensive premise types is $180 per incident cheaper than the most expensive premise types.

Stop Codes

AFAs can be falsely activated for a multitude of reasons. Depending on the cause of the activation (defined by the FRNSW assigned stop code) FRNSW may have quicker or longer incident time. This is because of the complexity of the investigation needed to be undertaken by FRNSW personnel involved for specific stop codes.

Table 4.14 shows the average cost associated with each false AFA response based on the assigned stop code.

4.14 Average cost per incident by assigned stop code

Stop code	Count	Average time per truck	Average cost (inc overheads)	Average cost per hour (inc overheads)	Description	Chargeable?
	No.	min	$	$		
700	0	-	-	-	False alarm or false call; insufficient information to classify further	✗
702	3 542	29.7	445	900	Alarm operated due to extreme weather conditions - storm conditions, lightning, thunder, heat, etc	✗
706	614	27.0	443	982	Council or water supply authority causes pressure fluctuation through mains system	✗
707	617	27.2	458	1 011	Alarm operated due to power surge/spike or short circuit	✗
711	410	28.2	474	1 009	Malicious false alarm- includes malicious activation of Break Glass Alarm or Manual Control Point	✓
731	2 730	31.3	500	959	Sprinkler suspected malfunction - eg loss of pressure and equipment faults	✓
732	11 375	24.9	424	1 021	Smoke detector malfunction monitored by fire service	✓
733	718	26.9	449	1 002	Heat detector malfunction monitored by fire service	✓
734	0	-	-	-	Sprinkler suspected malfunction - includes water pressure loss and equipment fault	✗
735	0	-	-	-	Smoke detector malfunction proprietary monitored	✗
736	0	-	-	-	Heat detector malfunction	✗

Stop code	Count	Average time per truck	Average cost (inc overheads)	Average cost per hour (inc overheads)	Description	Chargeable?
	No.	min	$	$		
738	2 952	28.7	478	999	Alarm system suspected malfunction - includes fault in wiring, alarm panel, inadequate maintenance	✓
739	0	-	-	-	Alarm system suspected malfunction - not classified above	×
745	0	-	-	-	False alarms generated from a non-AFASP monitored system - domestic and residential premises	✓
746	0	-	-	-	False alarms generated from a non-AFASP monitored system- commercial premises	✓
751	1 721	28.9	409	849	Smoke detector operated - no fire - smoke from other location	×
752	480	23.9	441	1 107	Heat detector operated - no fire - heat from other location	✓
754	0	-	-	-	Smoke detector operated- no fire- smoke from other location- internal smoke	×
755	0	-	-	-	Smoke detector operated- no fire- smoke from other location- external smoke	×
756	5 517	21.8	383	1 057	Cooking fumes - toast, foodstuffs, etc	✓
758	1 532	23.4	421	1 077	Simulated conditions - incense, candles, sparklers, smoke machine, etc	✓
759	0	-	-	-	Simulated conditions - no fire; not classified above	×
762	2 188	29.0	456	946	Accidental operation of alarm - includes activation of Break Glass Alarm or Manual Control Point	×
763	0	-	-	-	Failure to notify of test	×
764	751	21.4	353	987	Incorrect test by service company personnel	✓
765	6 144	24.6	414	1 009	Alarm activation due to workers/occupiers activities	✓
766	1 214	27.5	500	1 093	Alarm activation due to poor building maintenance - dust, cobwebs, insects, etc	✓
767	571	21.9	402	1 100	Alarm activation due to aerosol use - hair spray, insecticides, etc	✓
768	1 794	23.0	406	1 059	Alarm Activation due to steam - shower bath sauna, steam room etc	✓
772	111	26.0	451	1 042	Fire Indicator Panel active, Alarm Signalling Equipment not activated	✓
773	646	21.4	341	953	Fire Indicator Panel not active (includes system reset before arrival), Alarm Signalling Equipment activated	✓
902	34	18.3	342	1 118	COVID-19 related	×

Note: There were no false alarm incidents assigned stop codes 700, 734, 735, 736, 739, 745, 746, 754, 755, 759, and 763.

Source: FRNSW, CIE.

For instance, stop code 756, alarm activation due to cooking fumes is a less complicated to investigate than an alarm system malfunction (stop code 738). This is apparent in the incident time taken per truck on average to service this false alarm events such as only 21.8 minutes for stop code 756 (cooking fumes) whereas stop code 738 (alarm malfunction) has an average incident time per truck of 28.1 minutes. Consequently, stop code 756 cost $383 per incident on average and stop code 738 cost $478 per incident.

Forecast of cost drivers

Change in incident time

The incident time has not changed over the last 5 years as demonstrated by table 4.15.

4.15 Incident time per truck in the last 5 years

Fiscal Year	FY2016-17	FY2017-18	FY2018-19	FY2019-20	FY2020-21
	mins	mins	mins	mins	mins
Incident time per truck	25.5	25.7	25.9	25.8	25.3

Source: FRNSW, CIE.

This is consistent with a previous analysis conducted in 2012, which also estimated the turnaround time for trucks to be 25.02 minutes.[12]

The incident time is unlikely to change in the future and can be assumed to be an average of 25 minutes per truck.

Staff costs

The staff cost is driven by the FRNSW policy of number of people per truck. The cost of the staff is determined by FRNSW's enterprise agreement. The salary increase rate is set at 2.5 per cent.[13] Based on the enterprise agreement, staff costs are expected to continue to increase by 2.5 per cent over the next 5 years.

False AFA's impact on operational capacity

Active time vs standby time

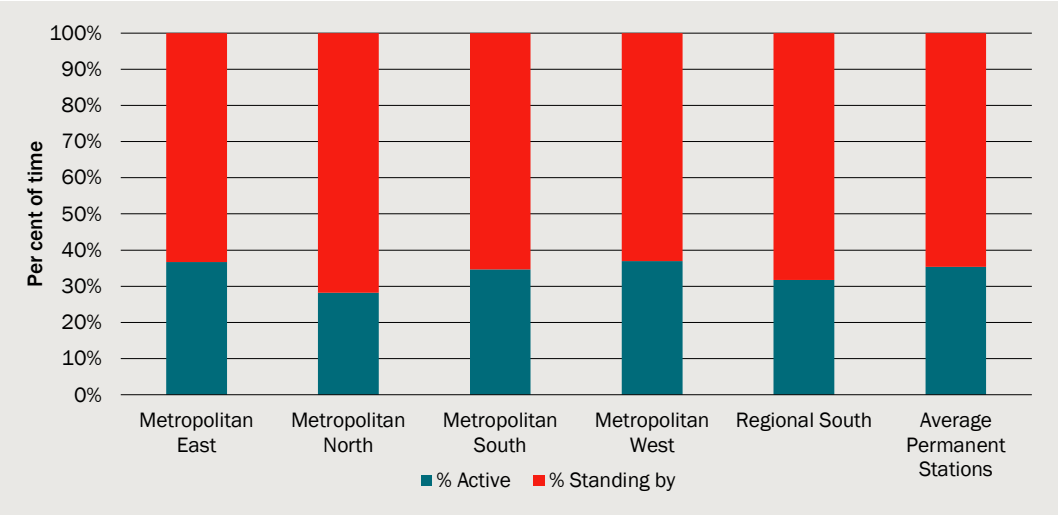
One way to estimate the impact false AFAs have on the capacity of operational staff is to consider the total active time vs standby time. This analysis is shown below for FRNSW's stations manned by permanent staff. Stations with retained staff have not been

12 Baker, K. (2012). Automated Fire Alarms (AFAs) – Estimated actual cost

13 Fire and Rescue NSW Annual Report 2019-2020

included, since there is no additional staff cost while a vehicle is on standby for these stations.

4.16 Standby time compared to active time (stations with permanent staff only)



Note: Only includes permanent stations

Data source: FRNSW analysis

This analysis sums the total time FRNSW trucks are undertaking activities for stations manned by permanent staff. This includes time responding to incidents and other activities.

The analysis also assumes that 4 hours with a 24 hour period (or an additional 16.6 percentage points) is spent by firefighters undertaking appliance and equipment checks, handover, and other activities that are not recorded within the system. Without this additional time included, the average per cent of standby time would be 81.3 per cent, rather than 64.7 per cent.

However, there is variation across the individual stations. When including 4 hours of appliance and equipment checks for each staff member within a 24 hour period, there are 14 stations that have less than 60 per cent of time on standby. The busiest three stations are Glebe, Miranda, and Lane Cove with 32.5, 43.5 and 50.3 per cent of time on standby respectively. Newcastle, Berowra and Dapto are the least active stations with 73.9, 73.5 and 73.1 per cent of time on standby.

There is less variation across truck types. The crews for standard class 2 and class 3 pumpers (which are frequently used in AFA responses) have a standby capacity of 65.3 per cent, including time for appliance and equipment checks.

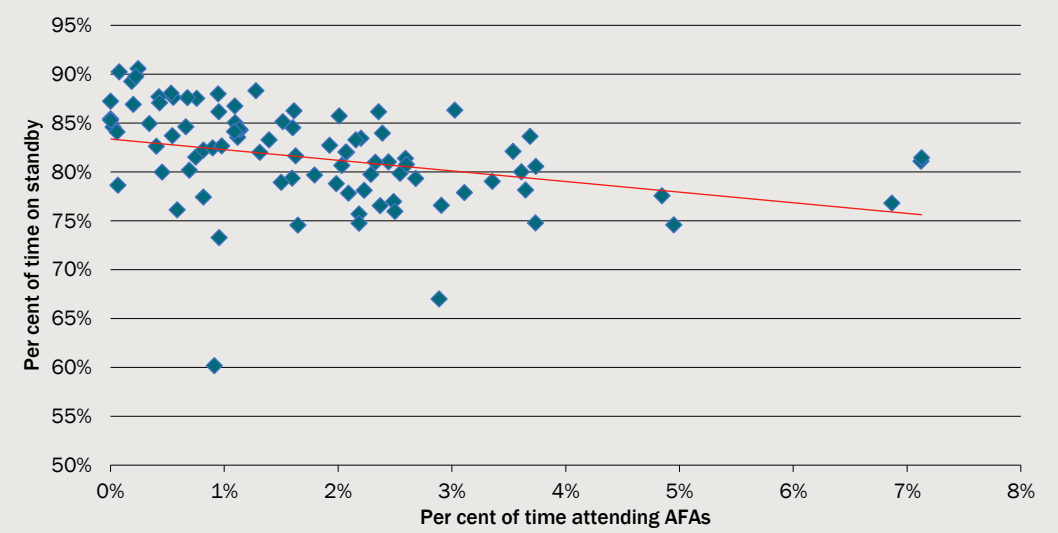
When considering the total standby time of all FRNSW stations regardless of the staff type, trucks are on standby 91.4 per cent of the time. However, this does not appropriately reflect the stations staffed by retained crew which will have zero standby time for their staff.

Time attending false AFAs vs standby time

The total time each truck is actively responding to false AFAs has been compared to the total amount of standby time for each station. The data for each individual station manned by full time staff is shown in chart 4.17.

This analysis includes the time a truck is assigned to an incident to the time the truck becomes available. This does not include the time taken to return back to the station, as the truck is available to respond to other incidences while on route.

4.17 Comparison of time attending false AFAs vs standby time



Data source: FRNSW, CIE.

Four outliers have been excluded from the analysis. These stations have a very high proportion of their total active time attending false fire alarms, potentially indicating a high volume of incident responses that were not assigned to their station.

The data shows a slight declining trend, as the proportion of AFA responses increase, there is a reduction in the per cent of standby capacity. This suggests that the existing capacity is being drawn from to resource false AFAs rather than additional capacity being rostered.

On average across all permanently manned stations, 1.6 per cent of active time is spent on false AFAs (excluding time returning to station). The relationship across stations suggests that a one percentage point increase in time attending false AFAs reduces standby capacity by one percentage point.

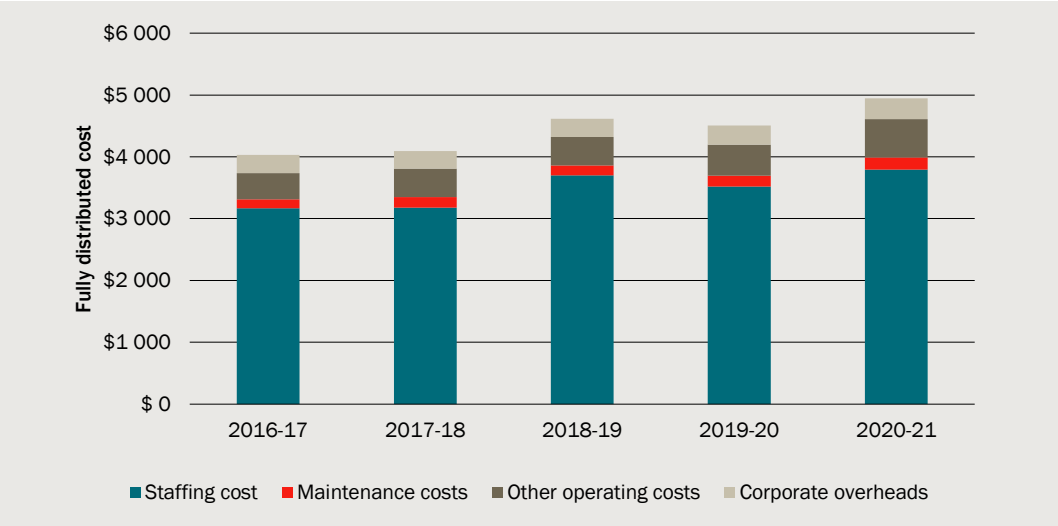
However, this analysis should be interpreted with caution. The analysis draws from two separate dataset that were extracted with varying levels of granularity. The analysis also doesn't account for response practices of individual stations, such as when truck and staff resources (including overtime) are pulled from multiple stations within the network.

If FRNSW charges were to include FRNSW response capacity within the charge, this would be consistent with the fully distributed cost methodology, discussed below.

Fully distributed cost method

An alternative to the incremental cost method shown above to estimate the AFA costs is the fully distributed cost approach, which divides the total costs across actual time spent at incidents (both chargeable and non-chargeable). Based on this approach, the total cost ranges from $4 029 in 2016-17 to $4 947 in 2020-21, as shown in chart 4.18.

4.18 AFA cost – Fully distributed cost method



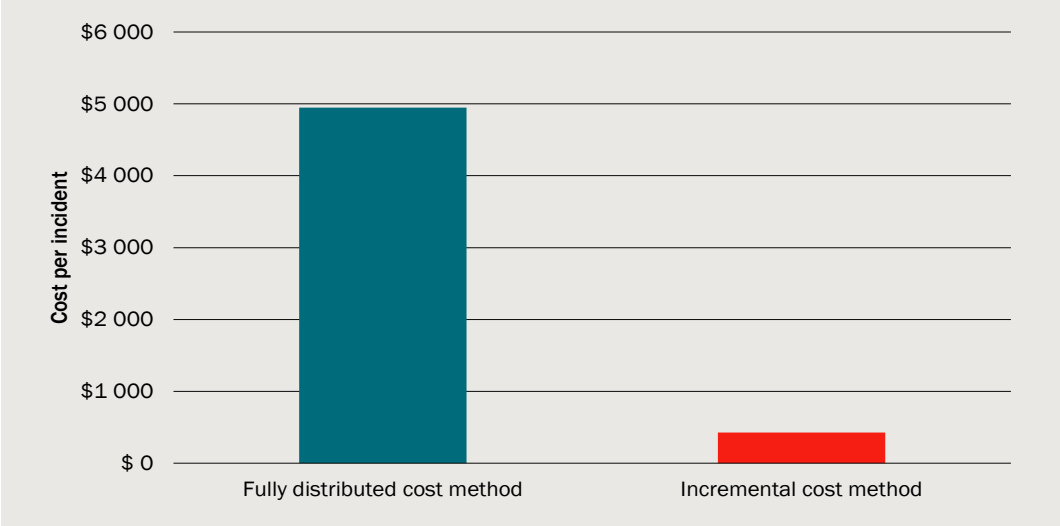
Data source: FRNSW, CIE.

A 2012 fully distributed cost analysis had estimated average response cost of AFAs to be $3 083 per incident in 2012-13.[14] Since then the FRNSW cost has gone up to $4 947.

These fully distributed costs have been calculated by applying the allocation of directly attributable costs provided by FRSNW to each of the cost drivers. Staffing costs include the total staffing expenses for brigade and retained staff (i.e. does not include admin and trade staff).

14 Baker, K. (2012). Automated Fire Alarms (AFAs) – Estimated actual cost

4.19 Fully Distributed Cost and Incremental Cost Comparison



Data source: CIE.

As demonstrated in the chart 4.19, the fully distributed cost method produces a significantly greater cost than the incremental method. This is predominately because of the significant amount of standby time incorporated into the fully distributed method.

What costs should be allocated to this activity?

The primary role of FRNSW is to respond to fire and other emergencies. This requires standby capacity 24/7, which means that FRNSW is incurring costs fire crew and equipment to be available but not always in use.

Because of this, the vast majority of standby time and capacity needed to respond to AFAs (false or not) should be funded through the ESL, and not solely captured through charges. This is supported through the analysis of standby time discussed above, with permanently crewed stations having approximately 65 per cent of time on standby, including an allowance for 4 hours in a 24 hour period for appliance and equipment checks.

However, there are a small number of stations with low capacity compared to the average. Where necessary, there appears to be sufficient capacity within the response network to respond to AFAs without the need to employ additional resources. However, if AFA's were to be responded only by retained staff, to maintain the capacity of permanent staff to response to core services, the cost would be $652 per incident (compared to $378 if only permanent staff responded).

The costs allocated to addressing false AFAs should be the additional/incremental cost to FRNSW, based on the standard operational response outlined in the policy requirements. This includes resources such as the number and type of appliances employed, staffing cost associated with each pumper, administration costs involved in processing the AFA activity such as invoicing the relevant AFASPs when a charge is involved. Other costs include fuel and operating costs on the pumpers involved during a false AFA response.

Do current charges reflect costs?

Current charges are substantially higher than the estimated incremental costs of responding to false AFAs (shown 4.20).

4.20 False AFA fee compared to estimated incremental cost

False AFA Fee	Average cost	Average cost per hour
$ per incident	$ per incident	$ per incident
1 600	429	998

Source: CIE.

What pricing structures encourage efficient provision of services?

Although the charge is not reflective of the actual cost to FRNSW, there are other considerations when determining the charge. For instance:

- the higher chargeable fee per incident than cost incurred is used to incentivise better management of AFAs to prevent false activations. Historically, FRNSW's justification for the AFA charge came from an analysis undertaken by Ken Barker (2012) which found that the average cost for AFA incidents were $7 393 per hour. The approach taken in this analysis is similar to the fully distributed approach outlined above
- the intention behind the levy is to reduce propensity of false AFAs so resources can remain readily available to attend actual fire events and emergencies when the need becomes apparent, and
- the charge also encourages good practices to reduce the instances of unwanted false alarms.

Regardless of these reasons, an incremental cost approach would indicate that charges are currently well above costs and suggests a lower charge would be more appropriate. A charge more closely aligned to incremental costs should lead to higher levels of efficiency, As set out in chapter 2. False AFA incidents are more homogenous than some of the other activities that FRNSW undertakes. Given this, a preferable pricing structure to encourage efficiency is a per incident charge rather than a per hour charge.

Efficiency analysis

The actual costs may not reflect the efficient costs if there are ways that resources allocated to each incident could be reduced.

As noted in chapter 2, most aspects of brigade operations are guided by rules and regulations that are outside of the scope of this work to review. The sections below show analysis of how inputs vary across regions and over time, as an indicator of whether there is any systematic evidence of inefficiency.

Distribution across NSW regions

Average cost per incident increases in regional and remote NSW than in and around the major cities, as shown in table 4.21.

4.21 Average false AFA costs across NSW regions per incident

	Count	Average time per truck	Total average cost (incl. Overheads) per incident	Average cost per hour (incl. Overheads)
	#	min	$	$ per hour
Major Cities	67 561	25	408	961
Inner Regional	6 883	28	553	1 184
Outer Regional	1 147	31	526	1 014
Remote	58	26	478	1 114

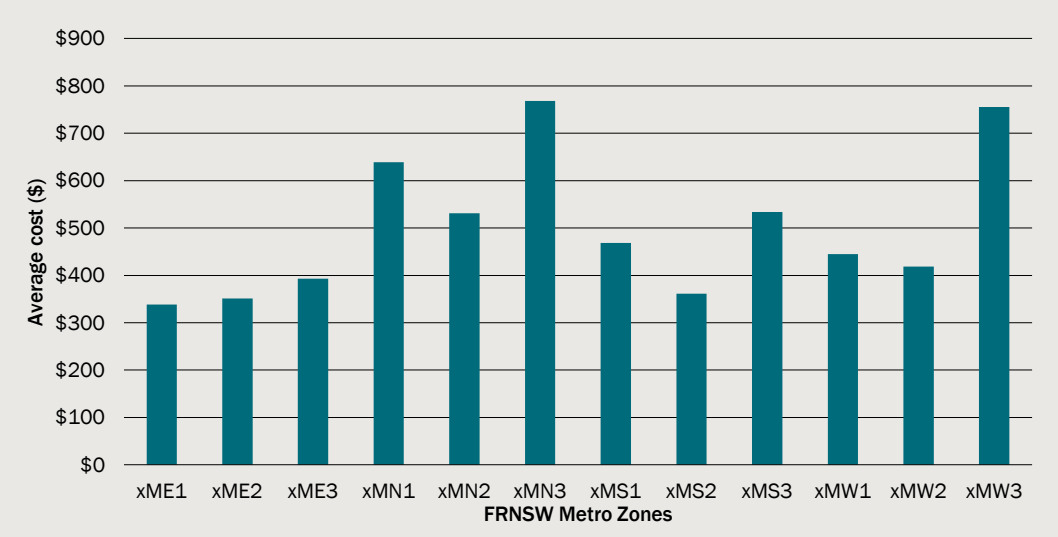
Source: FRNSE, CIE.

The different costs per region is mainly driven by the retained staffing more prevalent in remote and regional stations compared to those surrounding city centres. Incident time for stations also increases however, the increase is not a significant contribution to the higher expected costs for attending false alarms compared to the staffing characteristics in these remote and regional NSW fire stations.

Distribution across FRNSW zones

Across the FRSNW zones, there is a range in the average cost for attending false AFAs. Chart 4.22 and Chart 4.23 illustrate the cost per incident for FRNSW defined metro and regional zones.

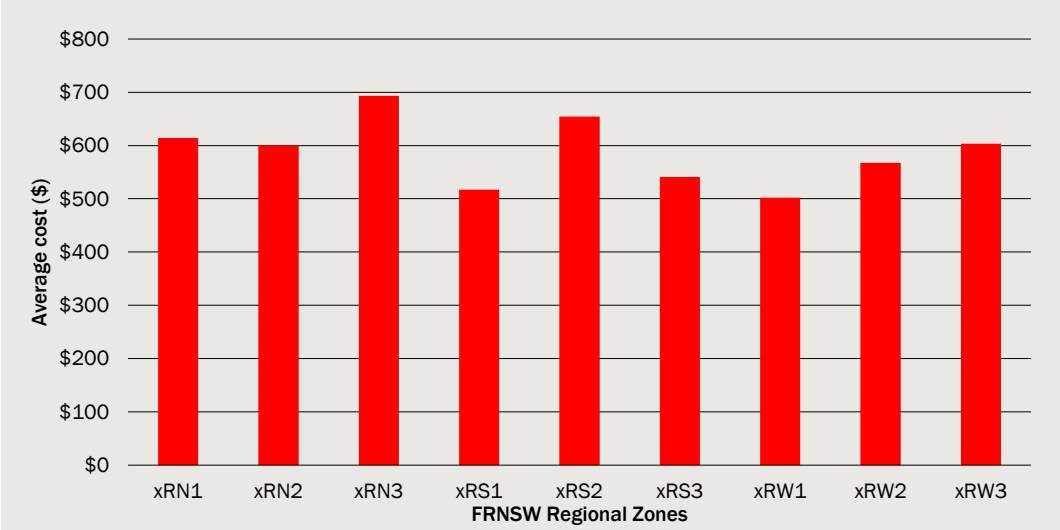
4.22 Average cost for false alarms by FRNSW in Metro zones per incident



Note: Sydney East (xME1), Sydney North (xME2), Sydney Mid-West (xME3), Hunter Coast (xMN1), Central Coast (xMN2), Lower Hunter (xMN3), Illawarra (xMS1), Georges River (xMS2), Sydney South-West (xMS3), Cumberland (xMW1), Parramatta (xMW2), Blue Mountains and Hawkesbury (xMW3)

Data source: FRNSW, CIE.

4.23 Average cost for false alarms by FRNSW in Regional zones per incident



Note: Mid-North Coast (xRN1), Northern Rivers (xRN2), Peel (xRN3), Monaro (xRS1), Southern Highlands (xRS2), Murray(xRS3), Western Slopes (xRW1), Upper Hunter and Central West (xRW2), Riverina (xRW3)

Data source: FRNSW, CIE.

Some of the key points from table 4.22 and 4.23 include:

- Regional zones usually have a higher average cost than metro areas for false AFA call outs. The average cost per incident for metro services is $500, compared to $588 for regional areas.
- False AFA attendances in Lower Hunter (xMN3) and Blue Mountains and Hawkesbury (xMW3) have higher costs on average than other metro zones.

Benchmarks against other jurisdictions

Victoria

Fire and Rescue Victoria (FRV) regulation 17(1)(a) provides for false alarms fees to be charged if there is no reasonable excuse found.[15] FRV may require the owner, occupier or owner's corporation of the premises to submit details of the false alarm circumstances. The fee charged is currently levied at $587 per quarterly hour for each truck.

Using average false AFA incident time for FRNSW and a 2 truck response, the per incident comparable charge is $2 348.

In FY2018-19 the revenue from false alarm levies amounted to approximately $14.4 million[16].

The eight-year average incident time for Metropolitan Emergency and Fire Services Victoria (MFB) to attend false alarms is 25.7 minutes per truck and the four year average

15 Fire Rescue Victoria (General) Regulations 2020

16 Fire and Rescue Victoria Regulatory Impact Statement, Proposed Fire and Rescue Victoria (General) Regulation 2020

incident time for Country Fire Authority Victoria (CFA) is 24.4 minutes per truck. This is comparable to FRNSW estimated incident time per truck.[17]

The *Firefighters' Presumptive Rights Compensation and Fire Services Legislation Amendment (Reform) Act 2019* established Fire Rescue Victoria (FRV) as a new organisation, replacing the Metropolitan Fire and Emergency Services Board (MFB) and bringing together MFB and the Country Fire Authority (CFA) firefighters under one organisation.

Table 4.24 and 4.25 estimate the fully distributed hourly cost per truck to MFB and CFA for false AFA attendances.

4.24 Hourly cost per truck for false alarm attendances by MFB in 2018-19

Direct and indirect cost category	Hourly cost per truck (in $)
Truck operational staffing	7 531
fuel	24
maintenance	170
fee	9
Sub-total direct cost per truck	**7 734**
Overtime and allowances for station personnel	
Personal protective equipment	1 141
Training	73
Administrative support	18
Sub-total indirect hourly cost per truck	**1 348**
Total hourly direct and indirect cost per truck	**2 580**

Source: Fire and Rescue Victoria Regulatory Impact Statement, Proposed Fire and Rescue Victoria (General) Regulation 2020.

4.25 Hourly cost per truck for false alarm attendances by CFA integrated stations

Direct and indirect cost category	Hourly cost per truck (in $)
Truck maintenance and support	37
Truck licencing	2
Vehicle direct costs (external Inc. Fuel) SAP	18
Sub-total direct hourly truck costs	56
Salaries and on-costs (including operational staff)	4 726
Other employee expenses	243
Sub-total direct hourly staffing costs	4 969
Land and buildings maintenance (external Suppliers)	38
Plant and equipment maintenance (external Suppliers)	23
General expenses (external suppliers)	15
Land and buildings - CFA internal maintenance costs	23

17 Fire and Rescue Victoria Regulatory Impact Statement, Proposed Fire and Rescue Victoria (General) Regulation 2020

Sub-total direct hourly station costs	**99**
Sub-total indirect hourly cost	**1 710**
Total hourly direct and indirect hourly costs per truck	**6 833**

Source: Fire and Rescue Victoria Regulatory Impact Statement, Proposed Fire and Rescue Victoria (General) Regulation 2020.

FY2018-19 weighted costs of MFB and CFA have been used to calculate weighted average per quarterly hour cost to FRV of attending false alarms and is $2 510 pertruck.[18] The hourly cost is calculated to be $10 040 per truck, based on the per cent of truck time spent on false alarms.

Western Australia

Western Australia Department of Fire and Emergency Services (DFES) introduced charging in 2016. It currently charges $1 337 per incident for false alarm attendances. Some built in fee leniencies include:

- Only charge for 4th and subsequent false alarms in a fiscal year
- Only one charge per 24-hour period (midnight to midnight).

Customers can also apply for a fee waiver within 21 days of the invoice.[19]

The fee has been introduced to reduce the number of false AFAs.

Key findings and conclusions

FRNSW responded to 47 656 AFA incidents in 2019-20, of which 98 per cent were a result of a false activation.

Most false AFA incidents are very short, with the majority completed within half an hour.

Given the consistency in incident time compared to Fire and Rescue Victoria (FRV), FRNSW's false AFA responses appear to be efficient. Additionally, false AFAs have an efficient administration and billing system, especially compared to other non-core services.

Table 4.26 summarises each of the incremental costs outlined earlier with this chapter. The sum of these costs indicates the estimated incremental cost for each false AFA truck and incident.

18 Fire and Rescue Victoria Regulatory Impact Statement, Proposed Fire and Rescue Victoria (General) Regulation 2020

19 See, https://www.dfes.wa.gov.au/safetyinformation/fire/businessandindustry/Pages/FalseFireAlarms-FAQs.aspx

4.26 Cost of responding to false AFAs

	Staff cost	Truck variable cost	Truck fixed Cost	Marginal admin Cost	Response coordination cost	Overheads	Total cost (incl. overheads)
	$	$	$	$	$	$	$
Per incident	286	20	5	31	32	54	429

Source: The CIE, FRNSW.

The current charges are higher than the cost incurred per incident, where the charges are recovered. There are many leniencies built into the system, so the fee is not always recovered. Almost 80 per cent of all false AFA incidents are chargeable (based on the stop code) but only for 58 per cent of all chargeable incidents are charged. In practice, FRNSW has charged for approximately 46 per cent of all false AFA incidents.

The total cost of $429 includes a mixture of permanent staff and retained staff. If false AFAs were to be staffed purely by retained workforce, as to avoid any negative impacts on the capacity to respond to core services, the cost would be $652.

5 *Automatic fire alarms management fees*

The National Construction Code of Australia (NCC) specifies that AFA systems are necessary for certain types of buildings. FRNSW enters into arrangements with Automatic Fire Alarm service providers (AFASP) for installation and maintenance of the fire alarm links between fire brigade services and other premises.

Although emergency fire responses are covered by the Emergency Service Levy, FRNSW charges the AFA service providers (AFASPs) for ongoing monitoring of premises under AFA arrangements.

Services provided and revenue

Currently there are 3 AFASPs in NSW (previously there were 5). As of 30 June 2021, FRNSW had 17 055 connected AFAs for which monitoring fees are charged monthly.[20]

FRNSW charges AFASP's for the following services provided under these arrangements:

- new alarm connection by AFASP to the FRNSW AFA system
- ongoing monitoring of an AFA
- quarterly AFASP maintenance fee
- AFASP communication system interface testing connection of an AFA, and
- transfer and reconnections of AFAs between AFASPs.

Other than monitoring and maintenance of AFAs, FRNSW also charges for responding to false alarms already discussed in Chapter 4.

FRNSW has an Automatic Fire Alarm System Agreement with each of the 3 service providers – Romteck Grid, Chubb Fire and Security and Tyco Australia Group T/As ADT Fire Monitoring. The contract is the same for all three service providers.

AFASPs are responsible for the communication and activation of fire alarms through to FRNSW with high degree of reliability. AFASPs also notify FRNSW if AFAs have not been maintained or tested in 6 months.

The AFASPs must ensure that each of its customers complies with the FRNSW agreement, NCC and all other requirements of relevant New South Wales Government authorities in relation to each Alarm Installation.[21]

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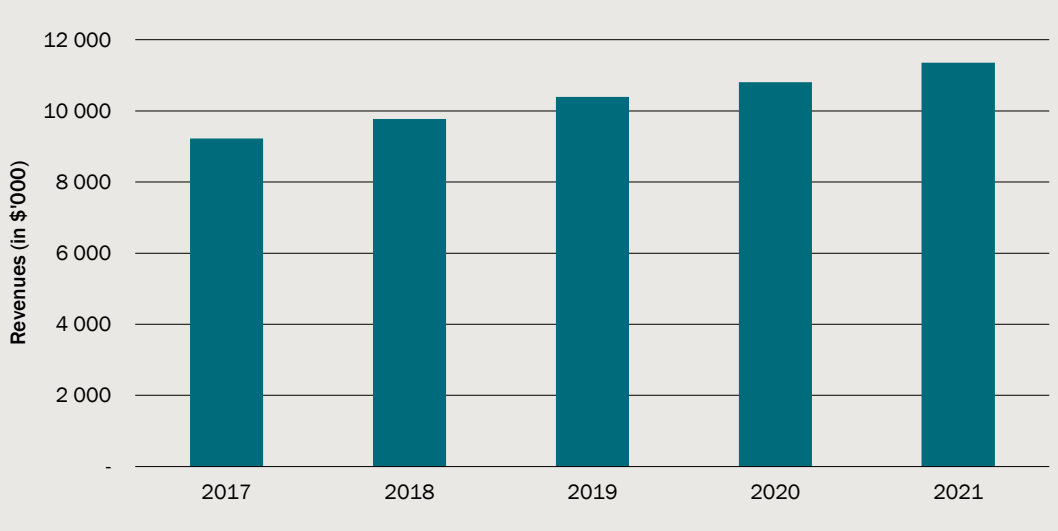
20 IPART Issues Paper

21 Fire and Rescue NSW, Automatic fire alarm service agreement, March 2020, see https://www.fire.nsw.gov.au/page.php?id=79

Revenue received

AFA management fees make up the second largest proportion of self-generated revenue at $10.3 million a year on average, second to false fire alarm charges. Chart 5.1 shows the revenue received from monitoring and maintenance charges in the last 5 years.

5.1 FRNSW Revenue from AFA management fees in the last 5 years



Data source: FRNSW.

FRNSW revenue from management fees has steadily risen in the last 5 years, from $9.2 million in 2016-17 to $11.4 million in 2020-21, and is expected to grow in the future. This growth is linked to increased density of both residential and commercial properties, which require AFAs.

The AFA management charges are increased by CPI annually with AFASPs advised in March so that new charges are applicable by July. Fees charged are fully reviewed at each contract renewal (the last few fee reviews were executed in 2012, 2015 and 2019).

The AFA management fees levied on AFASPs largely cover the administrative component of monitoring and maintaining AFAs at premises and buildings connected to the AFA system. AFASPs cannot negotiate these charges given they are predetermined in the AFA System Agreement.

FRNSW may amend the manner in which fees and charges are levied and the amount of the fees and charges by giving at least 90 days prior written notice to the AFASPs of such amendments.[22]

Alarm installation and monitoring fees

The scheduling of charging for installation of AFAs and monitoring fees is set out in the AFA System Agreement Terms and Conditions Attachment B (Schedule of AFASP Fees and Charges) as shown in table 5.2.

22 AFA system agreement terms and conditions Attachment B

5.2 FRNSW AFA installation charge and Ongoing monitoring fee

	Charge value	Frequency	Basis for charges
Alarm Connection Installation Fee			
First Connection	$256	Per event	To cover the administrative and operational processes to activate a new alarm
Second and Subsequent Connections	$128 each	Per event	
Alarm Installation Monitoring Fee			
Ongoing monitoring fee for first installation	$57.50 (not pro-rata)	Monthly	To cover the cost of ongoing reporting and management of the AFA system
Ongoing monitoring fee for second and subsequent installations	$28.75 each (not pro-rata)	Monthly	
Alarm Installation Monitoring Fee			
Transfer first installation between AFASPs	$128.00	Per event	To cover the administrative process to transfer between providers on the IT system
Transfer second and subsequent installation between AFASPs	$64.00	Per event	

Source: AFA system agreement terms and conditions Attachment B

Connection fees

A $256 connection fee is charged for the first AFA connection, then half the fee is charged for the second and subsequent AFA connections. For example, if a building requires 10 AFAs, then the total charge would be 1 first connection ($256) plus 9 subsequent connections ($128).

This charge is to recover the administration costs of establishing a new AFA and to recover the costs of a fire brigade crew attending the premise to conduct a Brigade Exercise.

- The administrative component relates to the assessment of the AFA connection application. Within this process:
  - the administrative team will initially assess the application for errors. The application is then inputted into the SAP-CRM system. When there are errors, the application will be returned to the AFASP to be corrected, before the process starts again.
  - the Operational Communications team will then validate the premise address, and input for key operational addressing data, and
  - the ESCAD system is subsequently updated to reflect the site information gathered by the operational crew who attend to conduct the Brigade Exercise.

  In total, most applications take about 90 minutes on average for an administrative staff member. Some applications are more time consuming and can take up to 4 hours if there are many errors.

  Based on the average time, the cost for FRNSW is $143 per connection.

- The Brigade Exercise involves travelling to the premise, arrange access, and undertake a safety risk assessment (such as identifying potential entry points and risks and becoming familiar with the building). The time needed for this step is highly variable depending on the building and ease of access. However, on average it is estimated that approximately 60 minutes is needed to undertake this assessment. This exercise is undertaken by a 4 crew truck (generally a standard pumper).

  Based on a 60 minute average duration, the cost to FRNSW is estimated to be $522 per connection. This cost has been aligned to the response vehicle charges, as further discussed in chapter 6.

The total cost per connection is $665. This estimation is based on the modified incremental approach. This approach accounts for the opportunity cost of time spent undertaking chargeable (or non-core) activities.

Although second and subsequent connections are charged at half the fee, the process is exactly the same for FRNSW, and the marginal efficiency gain is negligible for subsequent AFAs. Because of this, the cost for second and subsequent connections are estimated to be the same as initial connections.

Monitoring fees

For every connected AFA a monthly monitoring fee is charged. The fee for the first AFA is $57.50 per month and a fee of $28.75 is charged for the second and subsequent installations. As these fees were set a long time ago, the reasoning behind the lower fee for second and subsequent AFAs are unknown.

The monthly monitoring fees recover the costs for FRNSW to operate the AFA system, such as ongoing reporting and logistics. There are also various infrequent pieces of work that are also recovered through these fees, such as managing the AFA System Agreement (this contract is a 3 year contract, with the potential for 5 years with extensions). The cost of processes such as this are not captured elsewhere.

To estimate the operational costs of the AFA system, the following resource costs have been considered:

- the administrative team responsible for the ongoing operation of the system. This includes 4 staff members, 50 per cent of a Coordinator's time (Clerk Grade 9/10), 50 per cent of a Team Leader's time (Clerk Grade 7/8), a Business Services Officer (Clerk Grade 5/6) and an Administrative Support Officer (Clerk Grade 3/4). The total cost of this team, including oncosts, is $451 176 per annum.
- staff within the community safety team also support the ongoing operation of the AFA system through various activities, such as assessment of waivers (reviews, determinations and correspondence) and work with clients to reduce the number of false AFAs. The team includes 2 assessors (1 x Operational Support Level 2 and 1 x Clerk Grade 7/8), Team Leader (Operational Support Level 3) and a Fire Safety Compliance Manager (level 9/10). The total cost of this team, including on-costs, is $780 092 per annum.

The total cost of these two teams combined is $1 231 267. With 17 055 connected AFAs as at 30 June 2021, the cost per AFA is $72 per year. This estimation is based on the fully distributed cost approach.

Transfer fees

Transfer fees are charged when a premise changes their AFASP. The first connection transferred incurs a fee of $128 and second and subsequent connections for the same premise have a transfer fee of $64.

To facilitate this change, FRNSW's administrative activities are the same as an initial connection, minus the need for operational staff to inspect the premise and undertake a risk assessment – unless there is a substantial change in the use of the premise and a reassessment is needed.

In total the administrative time is estimated to be 90 minutes, which results in a cost of $143. This estimation is based on the modified incremental approach. This approach accounts for the opportunity cost of time spent undertaking chargeable (or non-core) activities.

Where monitoring of an Alarm Installation has been transferred from one AFASP to another during a calendar month, FRNSW does not refund the AFA Monitoring Fee to the relinquishing AFASP nor does it charge the acquiring AFASP for coverage for a fraction of the calendar month.

AFASP Application fees

Anyone can apply to become an AFASP. Once an application is received, the application is assessed by FRNSW and can be denied if the applicant is deemed unsuitable.

As the new applications are very rare, the timeframes of steps involved in the assessment and administrative process are difficult to assess. We are unable to determine if the current charge of $58 239 reflect the costs to FRNSW.

Maintenance fees

There are ongoing maintenance fees that AFASPs are required to pay in advance. For new AFASPs, the full first year fee is charged in advance. While for existing AFASPs, a quarterly fee is charged.

Table 5.3 shows the maintenance fees levied on the AFASPs, as defined in the AFA system agreement terms and conditions in Attachment B.

5.3 FRNSW AFA maintenance fee

	Charge value	Frequency	Basis of charge
Maintenance			
First Year	$51 716	Annual	To cover the cost to commission an IT platform to operate the AFA network
Second and Subsequent Years	$12 929	Quarterly	

Source: AFA system agreement terms and conditions Attachment B.

This charge recovers the cost of the IT platform that facilitates the AFA system. Currently FRNSW budgets for approximately $150 000 in costs per annum for this system, including some overhead costs, IT support and maintenance. This IT platform is also used for HAZMAT and building fire safety charges.

Each AFASP is charged an equal fee regardless of the number of AFAs or an assessment of the risks of the premises under each provider. This approach does not reflect the relative cost or risk of AFA across each service provider.

Testing fees

FRNSW can charge for testing AFA equipment. Additional service fees of $83.90 can be charged per event, per hour, plus expenses and a $1 549 retesting fee can be charged for third and subsequent rests.

However, these charges appear to be outdated with no known occurrences of this charge being placed. Since the fees were initially set, there has been significant efficiency gains to the AFA system, including the ability to undertake testing of AFAs remotely.

There is a private market to test the physical alarm, which is not a service undertaken by FRNSW. FRNSW are more likely to test the connection to the AFA IT platform.

5.4 Additional Service and retesting fees

	Charge value	Frequency	Basis of charge
Testing			
Additional Service Fee	$83	Per event per hour (plus expenses)	Unknown – charge is not applied in practice
Retesting Fee (third and subsequent tests)	$1 549	Per event	

Source: AFA system agreement terms and conditions Attachment B

Key findings and conclusions

AFA management charges are unlike many of FRNSW's other charges in that they are reviewed at the end of each AFASP contract period and indexed annually.

A summary of the current charges and the estimated costs are outlined below in table 5.5.

5.5 AFA management fees summary

Fee	Current charge	Charge frequency	Cost estimate
	$		$
Alarm installation and monitoring			
First Connection	256	Per event	665
Second and Subsequent Connections	128	Per event	665
Ongoing monitoring fee for first installation	57.50 (690 per year)	Monthly	72.19 (per year)
Ongoing monitoring fee for second and subsequent installations	28.75 (345 per year)	Monthly	72.19 (per year)
Transfer first installation between AFASPs	128	Per event	143
Transfer second and subsequent installation between AFASPs	64	Per event	143
New AFASP application			
Application Fee	58 239	Initial/once off	Unknown – charge not applied
Maintenance			
First Year	51 716	Annual	50 000
Second and Subsequent Years	12 929	Quarterly	12 500
Testing			
Additional Service Fee	83.90	Per event	Unknown – charge not applied
Retesting Fee	1 549.00	Retesting Fee (third and subsequent tests)	Unknown – charge not applied

Source: FRNSW, CIE

The difference between FRNSW's costs and the current charges is the greatest for ongoing monitoring fees. While the current charge is $690 per year for the first connection and $345 per year for the second and subsequent, the estimate cost per connection is much lower at $72 per year.

The cost for first connections (and subsequent connections) are not cost reflective. The current fees do not account for the operational staff time to travel to the premise (the full 4 crew truck) and undertake the required assessments.

The activities and processes to connect, monitor and transfer an AFA are the same regardless of if the connection is the first or any other subsequent connection. The current fee structure of charging less for these second and subsequent AFAs do not reflect the cost.

Although the quarterly maintenance costs reflect the cost of the IT platform needed to operate the AFA system, having an equal fee for each provider does not reflect the relative market share or the level of cost across each of the providers. It would be appropriate to charge a proportion of the costs based on the number of AFA connections

for each provider. This would also help to reduce barriers to market entry. In practice, this could mean adding the maintenance fees that are charged per provider to the ongoing fees per installation.

6 Hazmat

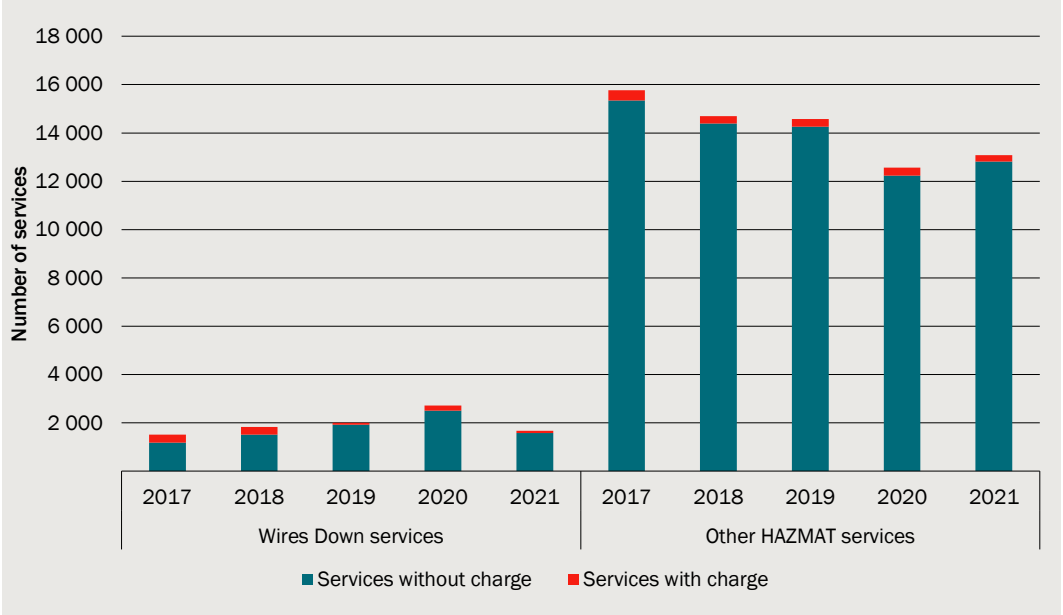
Number of services and revenue received

Section 40(4A) of the Fire and Rescue NSW Act 1989 allows for FRNSW to recover charges from HAZMAT services that occur anywhere in the State. This includes to confine or end the incident, or to render the site of the incident safe, or to save any lives or property in danger.

However, when charging for HAZMAT services, it is NSW Parliament's intention that the costs of FRNSW's response is shared with those who have responsibility of the HAZMAT event. Consistent with the 'polluter pays' term in Section 6 of the Protection of the Environment Administration Act 1991, those who generate pollution and waste should bear the cost of containment, avoidance or abatement. In practice, this implies that the cost of HAZMAT services should not be funded through the ESL.

Currently, only a small proportion of HAZMAT services are charged, as shown in chart 6.1.

6.1 Total number of HAZMAT services

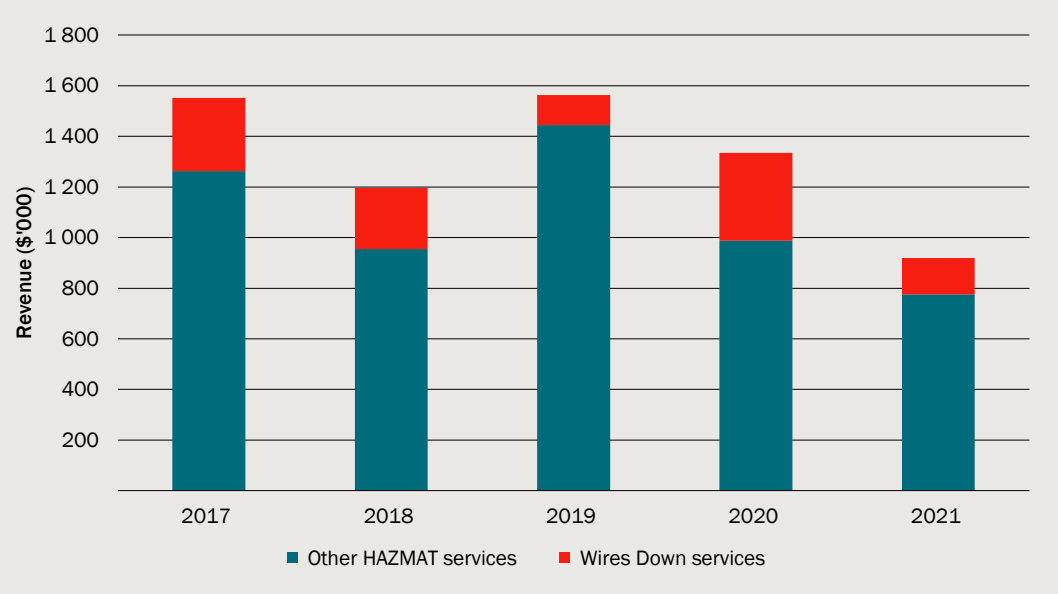


Data source: FRNSW

Wires Down services have seen a reduction in the percentage of services charged, from 22 per cent in 2017 to 6 per cent in 2021. Charging for other HAZMAT services has been consistently between 2 to 3 per cent of services.

Between 2017 to 2021, the average revenue from HAZMAT services was $1.3 million, as shown in chart 6.2.

6.2 Total revenue from HAZMAT services



Data source: FRNSW.

HAZMAT revenue is inconsistent. For instance, there was a 23 per cent decrease in 2018, followed by a 31 per cent increase in 2019. This variation is apparent for wires down services and other HAZMAT services.

HAZMAT revenue is a small proportion of FRNSW's total revenue, representing between 1.3 per cent to 1.9 per cent of total revenue between 2017 to 2021. From 2022 onwards, HAZMAT revenue is expected to remain at 1.3 per cent of total revenue, based on current charging arrangements.

HAZMAT operational response

FRNSW charges for HAZMAT services under the follow principles:

- when an incident involves HAZMAT and firefighting or rescue operations, FRNSW may only charge for the hazmat component and equipment, as the firefighting (or core service) activities are already funded through the ESL. The distinction between a core service and a HAZMAT service can depend on the chemical involved in the incident. For example, a petrol spill may be considered a core service as there is a high risk of fire, while a diesel spill will be considered a HAZMAT incident.
- charges are based on the principle of cost recovery
- a charge is not levied where the administrative cost of raising and collecting the charge is greater than the charge amount
- all resources used in the services, including those that are used to confine and end a hazmat incident and for rendering the incident site safe may be charged for (including standby time). This includes charging for equipment used in decanting, neutralising,

booming, clean-up, atmospheric and environmental monitoring, decontaminating the site and people (including firefighters), firefighters working in hazmat PPE, such as spillage clothing and fully-encapsulated gas suits, and relevant consumables

- incidents are eligible for a charge when over 2 hours for wires down incidents, and when other HAZMAT services are over 1 hour. These thresholds avoid people being discouraged from reporting incidents, and to provide an incentive for network providers to respond quickly to wires down incidents. Also, since invoicing for HAZMAT services is an inefficient manual process, the admin time to raise and recover the charge may be excessive relative to the charge. When charges are levied, the charge time includes the difference between the time the FRNSW truck is assigned to the incident and the time that FRNSW's duties are completed (apart from wires down, which is calculated from the time the relevant Utility/Distribution Network Service Providers (DNSP) was notified and the time that FRNSW's duties are completed).

However, not all eligible incidents are charged. Some of the considerations given when considering whether to waive a charge, include:

- financial or non-financial (personal) hardship. This may include unemployment or illness, and is determined in relation to gross income, commercial income/profit and assets (income producing assets)
- where the waste has been placed or disposed of on the premises unlawfully and the owner/occupier of the premises has no association with the waste
- goodwill, on a case by case basis at the discretion of FRNSW, as per the FRNSW Delegations Manual, and
- energy provider's 'Major Event Day' declarations for Wires Down incident charges.[23]

Waivers or reduction of charges is by exception and requires approval by the Commissioner or a delegated officer.

When a charge is made, the standard charges are prescribed in Section 45 and Schedule 1 of the *Fire Brigades Regulation 2014*. The charges in Schedule 1 Part 1 detail the costs of FRNSW personnel attending a hazmat incident. Part 2 relates to Special Items, such as goods and services hired or purchased, and Part 3 relates to the cost of consumables detailed in ESCAT, with an additional charge of 10% for handling.[24]

Cost drivers

The HAZMAT cost drivers have been estimated based on the modified incremental approach. This approach accounts for the opportunity cost of time spent undertaking chargeable (or non-core) activities. For both wires down and other HAZMAT services, there are the following cost drivers:

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23 Field Operations Division, 2020, Hazardous Material Incidents Charging Policy, Policy No EM05-001, Fire and Rescue NSW, NSW Government.

24 Field Operations Division, 2020, Hazardous Material Incidents Charging Policy, Policy No EM05-001, Fire and Rescue NSW, NSW Government.

- incident duration
- billing
- response coordination
- corporate and depreciation overheads, and
- equipment charges.

Table 6.3 below summarises each of the cost drivers. The sum of these costs indicates the estimated incremental cost for each HAZMAT truck and incident.

6.3 Average cost of HAZMAT responses

	Staff	Truck variable	Truck fixed	Billing	Response coordination	Overheads	Total cost	Total cost per hour
	$	$	$	$		$	$	$ per hour
Wires down								
Per truck	291	27	7	16	72	60	473	518
Per incident	336	32	8	19	85	69	549	497
Other HAZMAT								
Per truck	256	25	6	64	57	59	467	541
Per incident	313	30	7	84	65	72	571	556

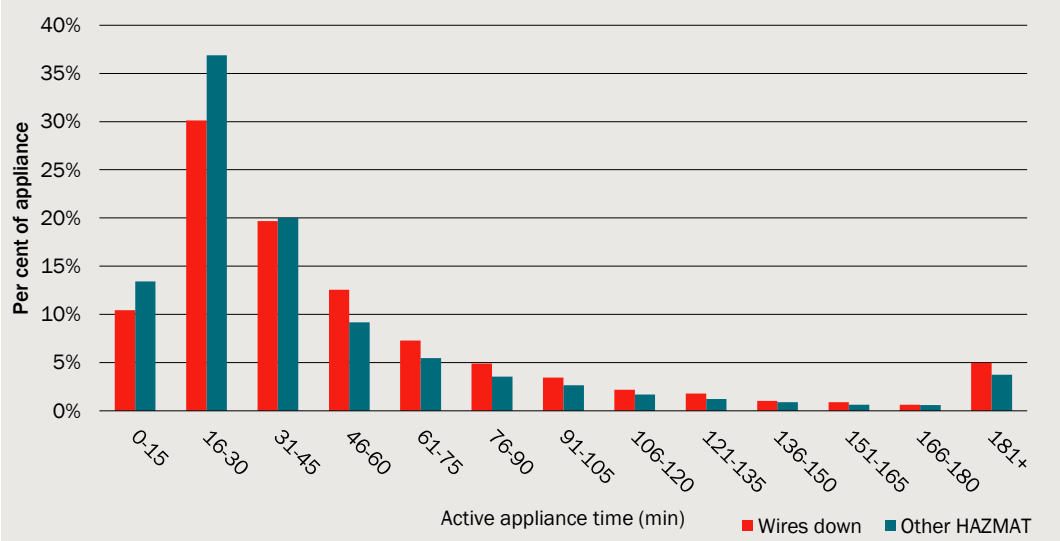
Source: CIE.

Incident duration

The total time of a HAZMAT response will influence the incremental cost for staff and trucks. Staffing costs are directly related to the active time during the service, while truck costs stem from increased depreciation and consumables, such as petrol and tyre usage.

For nearly all HAZMAT trucks, the incident duration is under one hour. For instance, 73 per cent of wires down services and 80 per cent of other HAZMAT services are 60 minutes or less. This is shown in chart 6.4.

6.4 HAZMAT total incident duration per truck



Note: includes the estimated time to return back to the fire station.

Data source: FRNSW, CIE.

The average time per truck is 55 minutes for wires down services and 52 minutes for other HAZMAT services.

Although most services are under an hour, there are some incidents with much longer times. 9 per cent of wires down incidences are above 2 hours and 20 per cent of other HAMZAT incidences are over 1 hour, making them eligible for a FRNSW charge.

The average total incident time for wires down services is 66 minutes, and other HAZMAT services are 62 minutes (with a median of 41 minutes and 30 minutes respectively).

These average incident durations result in the following incremental costs for FRNSW. Note that we expect that this charge would be linked to hours of the incident or truck, and that this would therefore vary for each incident.

6.5 Costs driven by incident duration

Service	Average staff cost	Average truck variable cost	Average truck fixed costs
	$	$	$
Wires down			
Per resource	291	27	7
Per incident	336	32	8
Other HAZMAT			
Per resource	255	25	6
Per incident	313	30	7

Note: includes the estimated time to return back to the fire station.

Source: FRNSW, CIE.

Response team

FRNSW fire stations consist of either full time fire fighters or retained staff. Depending on the team, the costs for FRNSW will be different. The cost of full time staff reflect their salary (plus oncosts), while retained staff incur a 'call out' charge with a minimum of 2 hours paid to the staff members.

This impacts on the incremental cost for services. For example, if a HAZMAT incident took 30 minutes to complete, the staffing cost of a truck maned by full time staff would include only the 30 minutes, while a retained crew would cost 2 hours of wages for each of the crew members. Because of this, retained crews result in a higher incremental staffing cost than crew members with full time staff, even though this can be a more efficient model in total.

The standby time for the two different staff types is also very different. While the average standby time for full time staff is approximately 65 per cent, retained staff have zero standby time, as they are only called and paid as needed (plus their annual retainer). In the incremental cost model, standby costs are not charged to the incident.

Truck costs

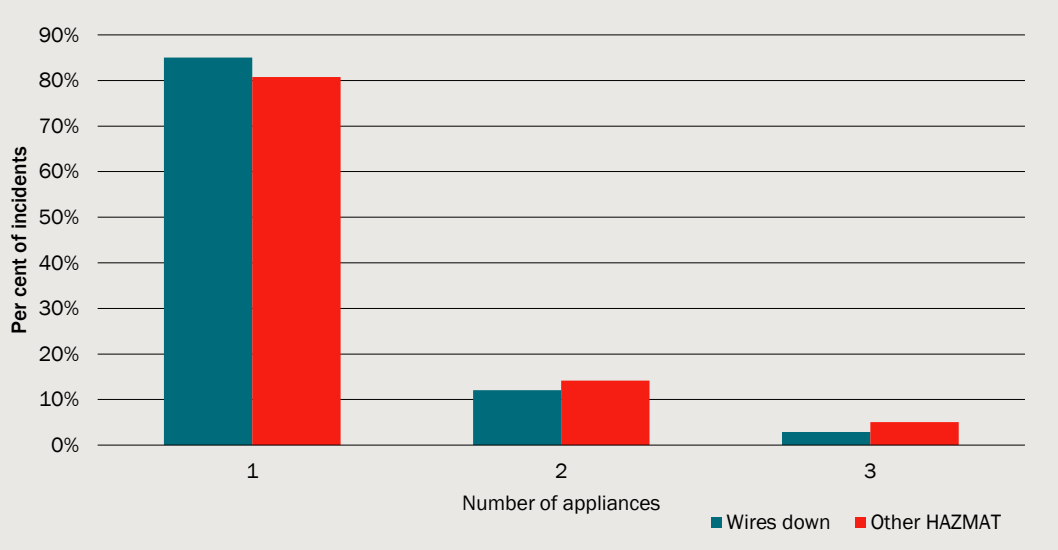
The number of trucks that attend an incident will impact on the cost.

This is predominately because of the additional staff cost, as FRNSW's operating guidelines stipulate the number of staff per truck (typically four staff for most response vehicles). However, variable and fixed costs also increase as the number of trucks responding increases, but these costs are relatively small compared to the staffing costs.

On average, wires down services have 1.2 trucks attending. There is consistently one or two trucks attending wires down services, with only 3 per cent of incidents involving more than 2 trucks.

Other HAZMAT services receive 1.4 trucks on average. However, there are some instances that require a large number of trucks. With the 2019-20 financial year, there were over 500 incidents that needed 3 or more trucks. 10 of these instances needed 10 or more trucks.

6.6 Number of trucks responding per incident



Data source: FRNSW, CIE.

Billing

Section 40(4A) of the *Fire and Rescue NSW Act 1989* allows for FRNSW to recover the costs from HAZMAT services from:

- the owner of, or the person having charge of, the hazardous material involved
- the owner or occupier of the premises on which, or the owner or person in charge of the vehicle or vessel on or in which, or arising out of the use of which, the incident occurred.

However, identifying the appropriate party to invoice for HAZMAT services is not always straight forward, and there is often a significant amount of administrative time to identify the required information for the appropriate person to charge. There can also be instances where an invoice is disputed and an alternative party to charge needs to be identified.

This is less of a concern for wires down services. Each electricity pole has a plate that identifies the electricity company that owns the pole. This allows FRNSW to accurately identify and charge the owner for the service, lowering the resource burden of charging for these services compared to other HAMZAT services.

When consumables are used during a HAZMAT service, the consumables are charged at cost, plus a 10 per cent handling fee. This requires operational staff to keep track of all individual consumables used during services, and manually record the consumables to be charged at the end of a service. This manual process can create a significant administrative process for staff, particularly for services that occur over multiple days and have multiple trucks involved.

The combined billing time to find an appropriate party to charge, input their details into the FRNSW's IT platforms, following up on charges and bad debts, and to keep track and manually charge for consumables is typically estimated to take an average of 15

minutes for wires down services and 60 minutes for other HAZMAT services. However, there are often incidents that take longer than these times.

Table 6.7 outlines the estimated billing cost for FRNSW for both wires down and other HAZMAT services. Because HAZMAT services are currently billed per truck, and the charging for consumables is linked to each truck, billing costs have been applied per truck.

6.7 HAZMAT billing costs

Service	Average billing cost
	$
Wires down	
Per resource	16
Per incident	19
Other HAZMAT	
Per resource	64
Per incident	84

Source: FRNSW, CIE.

Because of the administrative time involved in billing and charging for consumables, it is possible that service with a small duration (and charge) would not recover the administrative costs of collecting the charge, depending on how this charge was set.

Response coordination

As previously outlined in the false AFA charges chapter, the Operational Communications team supports both AFA and HAZMAT services by assigning resources to incidents through the ESCAD system.

A team member from the Operational Communications team will receive the initial call or alarm, assign a response team with the quickest estimated response time and monitor the incident throughout its duration (i.e. until the truck is available to respond to another incident).

The cost of this team has been included for both wires down and other HAZMAT incidents, as shown in chart 6.8, based on the incident duration (not including the time to drive back to the station).

6.8 HAZMAT response coordination costs

Service	Average response coordination cost
	$
Wires down	
Per resource	72
Per incident	85

Other HAZMAT	
Per resource	57
Per incident	65

Source: FRNSW, CIE.

Overheads and depreciation

The approach to charging for overheads and depreciation is consistent with the AFA analysis. The HAZMAT overheads include:

- a percentage cost labour and operating costs of Corporate Services Division and Governance and Legal Regulatory Services have been added to the total cost of each HAZMAT service (6.9 per cent)
- a depreciation overhead has also been added to account for the building, computers, and other equipment (4.5 per cent), and
- a maintenance cost has been included to account for building, computers, communications and other general maintenance costs (3.0 per cent).

Other cost drivers considered

Training

All FRNSW response teams have a fundamental level of training for HAZMAT responses. This allows all trucks to respond to minor HAZMAT incidents.

Because of this underlying level of training needed for the majority of HAZMAT incidents, training of FRNSW staff has not been specifically allocated to HAZMAT incidents.

Capacity of HAZMAT stations

Because HAZMAT services are not funded through the ESL, the capacity or standby time for HAZMAT trucks and staff helps to determine the most appropriate charging structure.

For instance, if 100 per cent of HAZMAT truck time was spend in standby time or responding to HAZMAT services, then a top down average cost per truck would be appropriate (such as the 'fully distributed cost method' outlined further below).

However, this is not the case. When responding to core and non-core services, the closest available crew is assigned to the incident. This can include standard pumpers and HAZMAT pumpers. For example, with in the 2019-20 financial year, 48 per cent of HAZMAT responses were from 'standard pumpers'. For HAZMAT incidents, this is enabled by training all standard fire fighters with a baseline level of HAZMAT training.

Because of this, the standby time for HAZMAT trucks and crews has not be incorporated into the charge rates under the incremental cost approach. This is included under a fully distributed cost approach.

Additional cost of HAZMAT pumpers

Some specific HAZMAT vehicles have a higher purchase cost than FRNSW's standard pumpers because of the additional HAZMAT equipment installed.

When considering if there should be a specific or additional charge for these vehicles, we considered that HAZMAT vehicles are not solely used for HAZMAT incidents. Because these vehicles are used for both charged and non-chargeable services, an additional charge was not appropriate.

However, the exception to this is vehicles that have a crew of less than four, such as HAZMAT vehicles other than a HAZMAT pumper. These vehicles have a different cost structure to pumpers and a lower cost to FRNSW. This is further discussed below.

Forecast of cost drivers

Change in incident duration

Table 6.10 below shows the average incident duration for both wires down and other HAZMAT services over the past 5 years.

6.9 Incident duration per truck in the last 5 years

	FY2016-17	FY2017-18	FY2018-19	FY2019-20	FY2020-21
	In mins	In mins	In mins	In mins	In mins
Wires down	50.0	47.8	55.5	54.7	50.6
Other Hazmat	51.7	52.0	51.4	51.7	51.1

Source: FRNSW, CIE.

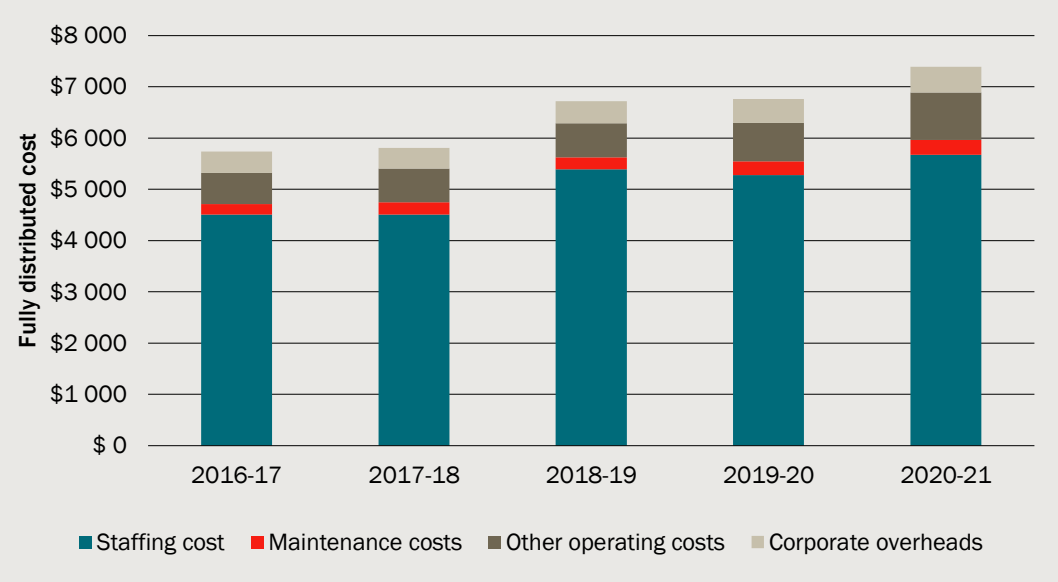
Although there has been some small movement in the average cost year on year, there is no clear trend either increasing or decreasing. We anticipate that the average incident duration will remain consistent over the next 5 years.

Fully distributed cost method

An alternative method to estimate the HAZMAT costs is the fully distributed cost approach, which divides the total costs across actual time spent at incidents (both chargeable and non-chargeable).

Based on this approach, the total cost ranges from $5 737 in 2016-17 to $7 391 in 2020-21, as shown in chart 6.10.

6.10 Fully distributed costs per incident

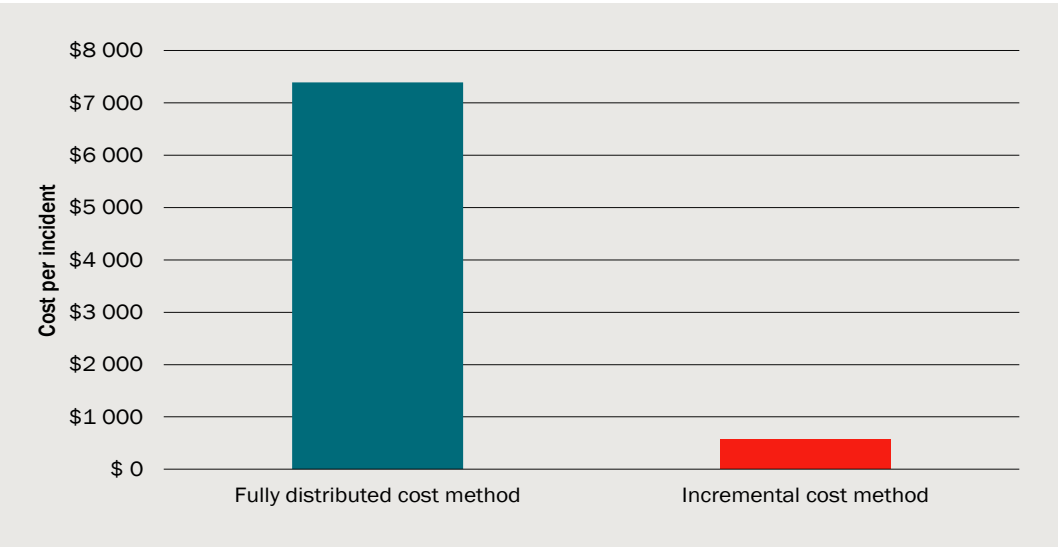


Data source: FRNSW, CIE.

These fully distributed costs have been calculated by applying the allocation of directly attributable costs provided by FRSNW to each of the cost drivers. Staffing costs include the total staffing expenses for brigade and retained staff (i.e. does not include admin and trade staff).

The fully distributed cost method produces a substantially higher cost than the incremental method, as shown in chart 6.11. This is predominately because of the significant amount of standby time incorporated into the fully distributed method.

6.11 Comparison of methods



Data source: CIE.

The fully distributed cost method would be appropriate for HAZMAT services if the HAZMAT staff and trucks were solely used for HAZMAT incidents. This would ensure

that the capacity and standby time for HAZMAT trucks and staff are fully captured in the charge.

However, many HAZMAT incidents are responded to by non-HAZMAT trucks, and HAZMAT trucks are also frequently used in other core (non-chargeable) services. For instance, more HAZMAT services were responded to by 'standard pumpers' than 'HAZMAT pumpers' in 2019-20.

Because of this, the standby time and capacity needed for HAZMAT responses should be funded through the ESL, and not solely captured through charges.

Do current charges reflect costs?

The existing standard charges for HAZMAT services are prescribed in Section 45 and Schedule 1 of the *Fire Brigades Regulation 2014*. These charges are shown in table 6.12 below compared to the estimated incremental cost per truck.

6.12 Charges for performing services in relation to hazardous material incidents

Charge Item	Charge value per hour	Estimated cost (excluding FRNSW 10% margin for equipment)
	$ per hour	$ per hour
Each standard pumper	423	606
Each hazmat pumper	423	588
Each hazmat vehicle other than a hazmat pumper	286	338
Each hazmat delta decontamination shelter	286	N/A
Each special operations response vehicle	286	244
Each boat (including a trailer and vehicle to tow it)	286	N/A
Each helicopter	3 300	N/A
Each incident command vehicle	275	N/A
Each hose	55	33
Each fully encapsulated gas suit	275	89
Each spillage suit	55	9
Each self-contained breathing apparatus	55	38
Each standard gas detector	55	78
Each unit of specialised detection equipment	110	126
Trailer Chemical Decon foram - Generic	Not specified	258
Diaphragm Pump - Generic Pumps 2000	Not specified	41

Note: includes both wires down and other HAZMAT services.

Source: Fire Brigades Regulation 2014, Schedule 1.

Vehicles with 'N/A' have not been used in HAZMAT responses in 2019-20. Because of this, the incremental cost cannot be calculated.

Vehicle charges and costs

There is a slight difference in the average costs for standard pumpers and HAZMAT pumpers per hour. However, this is predominately driven by the relatively larger admin costs for standard pumpers. This occurs because the average time per truck is longer for HAZMAT trucks, meaning that admin charges are a smaller percentage of the total charge. However, other cost drivers are very similar, implying that the charge should not discriminate between the two truck types. When combining the results for both standard pumper and HAZMAT pumpers, the average cost per hour is $606 (and an average cost of $468).

Although the decontamination shelter and the HAZMAT boat have not been used in the 2019-20 financial year, the cost drivers are expected to be very similar to other HAZMAT vehicles, as the number of brigade staff per crew is two for these vehicles. The cost per hour for these vehicles is $338.

The lower per hour cost for the special operations response vehicle is driven by the lower fixed costs and a lower crew size (one brigade member), although this brigade member is a senior staff member. While the direct cost of this vehicle is lower, it is generally reserved for larger incidents that are attended by senior members of the Brigade. Because of these lower cost drivers, the cost recovery charge for the special operations response vehicle should be lower than other HAZMAT vehicles. The cost per hour for this vehicle is $244.

Equipment charges and costs

To estimate the incremental cost of equipment, we have calculated the total time HAZMAT trucks are utilised attending only specific HAZMAT related incidences, excluding wires down incidents. For example, the cost of the spillage suit has been calculated based on the active time for spillage related incidents.

This time is then used to determine the average time HAZMAT equipment could be in use per week per response. The equipment cost is then divided by its useful life (as defined in FRNSW's enterprise asset management system (used for maintenance and replacement purposes) and the average time calculated. Staff costs to use the equipment have not been included as this is already captured under the truck costs.

This approach has the limitation of not knowing exactly how many times the equipment was used. This information was not available, without manually reviewing individual invoices.

Based on this approach, the equipment charge values are not reflective of the actual cost. For example, the fully encapsulated gas suit has a current charge of $275 per hour, with a purchase price of $3 000, this charge rate implies that the suit has a usable life span of 11 hours. However, based on the life span in FRNSW's enterprise asset management system

(10 years) and the estimated potential use from HAZMAT responses, the cost is approximately $89 per hour (excluding FRNSW's 10 per cent margin).

In practice this list does not cover the full list of consumables that can be charged. Although the charge for hoses, gas suit, spillage suit, breathing apparatus, gas detectors, and specialised detection equipment are outlined in the regulation, there are a long list of other consumables that FRNSW also charges for. These are all charged at cost, plus a 10 per cent margin.

Efficiency analysis

The actual costs may not reflect the efficient costs if there are ways that resources allocated to each incident could be reduced.

As noted in chapter 2, most aspects of brigade operations are guided by rules and regulations that are outside of the scope of this work to review. The sections below show analysis of how inputs vary across regions and over time, as an indicator of whether there is any systematic evidence of inefficiency. Further, given that the charging structure will most likely be per hour, inefficiencies in time are not relevant because they will not be mitigated by the approach to charging on an hourly basis.

Distribution across NSW regions

6.13 Average of other HAZMAT costs across NSW regions

	Count	Average time	Average cost per truck (incl. Overheads)	Average cost per truck per hour (incl. Overheads)
	(#)	(min)	($)	($ per hour)
Major Cities of Australia	9309	47	445	573
Inner Regional Australia	2085	62	511	497
Outer Regional Australia	434	102	638	376

Source: FRNSW, CIE

6.14 Average of wires down service costs across NSW regions

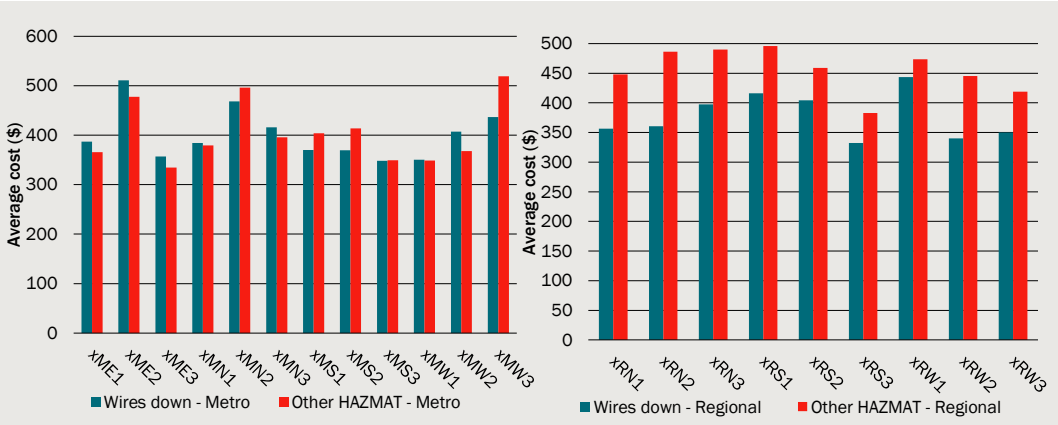
	Count	Average time	Average cost per truck (incl. Overheads)	Average cost per truck per hour (incl. Overheads)
	(#)	(min)	($)	($ per hour)
Major Cities of Australia	4208	56	472	510
Inner Regional Australia	445	48	434	537
Outer Regional Australia	127	52	449	522

Source: FRNSW, CIE

Distribution across FRNSW zones

Across the FRSNW zones, there is a range in the average cost for wires down services and other HAZMAT services. The average wires down and other HAZMAT costs for each of the FRNSW zones are shown in chart 6.15 below.

6.15 Wires down costs by FRNSW Zone



Data source: FRNSW, CIE.

Some of the key points from table 6.15 include:

- There are significant differences across the zones. This difference does not appear to be driven by the specific service type, and is more likely driven by local factors, such as the local industry. For instance, when the average cost for wires downs services is high, so too are the average costs for other HAZMAT services.
- Regional zones typically have a higher average cost than metro areas for other HAZMAT services. The average metro cost was $543 compared to $704 in regional areas. However, wires down services are cheaper in regional areas on average, with the metro average wires down service costing $552 compared to $527 for regional areas.
- The difference in the average cost of wires down services and other HAZMAT services is smaller in metro zones. For metro zones, other HAZMAT services are approximately 1 per cent less expensive than wires down services. While other HAZMAT services in regional zones is 21 per cent higher on average than metro zones.

What pricing structures encourage efficient provision of services?

When considering the pricing structure for both wires down services and HAZMAT services there are various behavioural implications that need to be considered. For instance:

- the charge should ensure that there is an incentive for third parties to act promptly. For example, the current charging policy provides a financial incentive for electricity pole owners to respond within 2 hours and avoid a charge
- ensuring that the minimum charge considers the administrative burden to FRNSW.

- is not too high to create a strong dis-incentive for people not to report incidents and avoid a charge, and
- considers if there should be a difference in policy for domestic and commercial charges, as the insurances and ability to pay significant fess may be different.

HAZMAT key findings and conclusions

Most HAZMAT incidents are short. For example, a frequent HAZMAT response is to respond to diesel on the road following a car accident. Such an incident is very short and does not result in a significant cost to FRNSW.

However, some HAZMAT incidents require a significant number of FRNSW's trucks and consumables and can span across multiple days. Within the 2019-20 financial year, there were three separate instances requiring over 17 FRNSW trucks costing FRNSW over $25 000 per instance not including consumables. Although these longer HAZMATs are infrequent, they have a substantial cost impact to FRNSW.

Because of the wide range of HAZMAT incidences, charging per truck is expected to be the most cost reflective method. Since staffing time is the most significant cost driver for both wires down and other HAZMAT services (75 per cent and 64 per cent respectively), the charge for specific trucks should be based on the resourcing requirements for each truck. For example, since standard pumpers and HAZMAT pumpers both have a crew of four people, they should have the same charge value. This is outlined below with the average cost of vehicles by their crew type.

6.16 Vehicle cost by crew type

	Vehicle examples	Average cost per hour
4 crew vehicles	Standard pumper and HAZMAT pumper	$606
2 crew vehicles	Other Hazmat vehicles, decontamination shelter and the Mobile Command Centre	$338
1 crew vehicles	Special operations vehicle	$244

Source: CIE.

This charging structure also reflects the fact that both standard pumpers and HAZMAT pumpers can respond to HAZMAT incidents, and that the 'client' does not choose their response vehicle.

The costs developed above are similar to the existing charges applied. From a cost recovery perspective, an important issue is the small number of incidents actually charged for, which is outside the scope of this review.

There are some small differences between FRNSW's costs for wires down services compared to other HAZMAT services, such as:

- Admin time. Wires down services are significantly more efficient in administration. This is partly due to the pole's owners details being provided on each pole, and FRNSW not needing to spend resources tracking down the appropriate party to charge. However, wires down administration is also very automatic, while other HAZMAT services is very manual.

- Other HAZMAT services draw from many more consumables and equipment. However, as these costs are passed on through the charges, there is minimal impact to FRNSW.

Despite these differences, there is little evidence to suggest that charges for wires down should be different to other HAZMAT services. All other cost drivers between the two services are very consistent.

7 Fire safety in built environment

FRNSW provides advice and approval of fire safety provisions in building development and provides fire safety inspections where required.

With respect to safety provisions in building development, clause 144 of the *Environmental Planning and Assessment Regulation 2000* requires certain plans and specifications to be referred to New South Wales Fire Brigades.

Fire safety in built environment

The Fire Safety Branch "provides technical advice, assessment and consultancy services to the building and fire safety industries, and by offering guidance to regulatory authorities and government agencies to ensure fire safety measures are commensurate with identified risks and comply with regulatory and legislative obligations".[25]

The branch comprises fire safety officers (firefighters), engineers, building surveyors and administration staff across five business units:

- Fire Safety Advisory Unit
- Fire Safety Command Liaison Unit
- Fire Safety Compliance Unit
- Fire Safety Infrastructure Liaison Unit
- Fire Safety Policy Unit[26]

Currently there are on average 37 FTEs in the Fire Safety Branch and an additional 9 FTEs in the Admin and Project Services section, of which some directly support the Fire Safety Branch. The Fire Safety Branch provides services during business hours from Monday to Friday. As these services are distinct from emergency activities, there is not a requirement for spare capacity provided around the clock, as there is with emergency activities.

FRNSW's services related to fire safety provisions in the built environment are:

- conducting compliance inspections
- providing fire safety reports (initial and final reports)
- assessing of Building Code of Australia Category 2 fire safety provision

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25 Fire and Rescue NSW, *About the Fire Safety Branch,* https://www.fire.nsw.gov.au/page.php?id=9169 Accessed 21 October 2021.

26 Fire and Rescue NSW, *About the Fire Safety Branch,* https://www.fire.nsw.gov.au/page.php?id=9169 Accessed 21 October 2021.

- attending fire safety meetings
- providing advice, assessment or consultancy services
- inspecting installed fire safety measures
- providing comment to consent and regulatory authorities
- other services required to meet statutory fire safety requirements.

FRNSW provides fire safety services including inspections and fire safety reports across the state.[27]

Current charging framework for monopoly services

IPART identified FRNSW as the monopoly provider of the following services related to fire safety in the built environment:

- providing an initial fire safety report (prior to issue of a construction certificate)
- providing a final fire safety report (prior to issue of an occupation certificate)
- providing a fire safety system report (prior to issue of an occupation certificate)
- attendance at a fire safety meeting associated with development
- providing advisory, assessment or consultancy services for State significant infrastructure, Crown building or other development work
- inspections of installed fire safety measures as part of a maritime lease.[28]

Section 42 of the *Fire and Rescue NSW Act 1989* enables Fire and Rescue NSW to charge for the provision of these services related to fire safety provisions in the built environment. These services and their associated charges are prescribed in section 46, section 48, schedule 2 and schedule 3 of the *Fire Brigades Regulation 2014.*

The current charging framework is a mix of hourly rates, daily rates, fixed fees or charges specified by the cost of development. Table 7.1 outlines the current charges for the six chargeable services provided by the Fire Safety Branch.

7.1 Current charges for additional statutory fire safety services

Service	Current charge	Section of FB Regulation 2014
Initial Fire Safety Reports	▪ Based on cost of development (see below)	46(1)
Final Fire Safety Reports	▪ Initial inspection — $215 plus $200 for each additional hour, or part of an hour, more than 2 hours ▪ Re-inspection — $430 plus $200 for each additional hour, or part of an hour, more than 2 hours	46(2)

27 IPART, 2021, *Review of Fire and Rescue NSW's fees and charges: Issues Paper,* page 7.

28 IPART, 2021, *Review of Fire and Rescue NSW's fees and charges: Issues Paper,* page 22.

Service	Current charge	Section of FB Regulation 2014
Fire Safety System Report	▪ Hourly charge according to rank of fire member (see table 7.2)	48
Assessment of a Building Code of Australia Category 2 fire safety by the Commissioner or a fire brigade member	▪ $180 flat rate per Category 2 item	46(3)
Attendance by the Commissioner or a fire brigade member at a fire safety meeting in connection with a development or proposed development	▪ $200 per hour, or part of an hour, of the meeting	46(4)
Provision of advisory, assessment or consultancy services by the Commissioner or a fire brigade member (if fee not otherwise prescribed) in respect of: ▪ State significant infrastructure ▪ Crown building work ▪ Other development	$2 600 per day	46(5)
Fire safety inspection of maritime lease	▪ Hourly charge based on the rank of fire brigade member/s per hour of attendance at an inspection (see table 7.2) ▪ Minimum of two fire brigade members conduct inspection	

Source: Fire Brigade Regulation 2014 .

Table 7.2 outlines the hourly rates by rank of members of the fire brigade as outlined in Part 1 of the *Fire Brigade Regulations 2014* and the current staff cost per hour by rank.

7.2 Hourly rates by rank of members of fire brigade

Rank of member of fire brigade	Part 1 of FB regulations	Current staff costs[a]
	$/hr	$/hr
Fire safety engineer	200	130
Chief superintendent or above	132	172
Senior building surveyor	130	123
Building surveyor		108
Engineer	130	130
Fire safety manager	125	145
Superintendent	121	159
Fire safety team leader	110	135
Inspector	99	135
Fire safety officer	90	114
Station commander or captain	83	135
Firefighter	66	95
Admin (weighted average across grades)	Not specified	91

[a] Current staff costs per hour include direct staff costs (superannuation, insurance, annual, sick, and public holiday leave entitlements and taxes), corporate overheads, and overheads for depreciation and maintenance of vehicles

Source: Schedule 3 of the Fire Brigade Regulation 2014.

Number of applications received and services charged

Number of applications received and services charged

Table 7.3 outlines the number of fire safety in the built environment service applications received and services completed and charged between 2018 and 2021 (data was not provided for 2017). Three services don't have recorded data:

- Assessments of Building Code of Australia Category 2 fire safety provisions were conducted during this period, however the number of services provided was not recorded separately as these are conducted as part of an IFSR and FFSR. It is not a separate activity.[29]
- Fire safety inspection for maritime lease was last billed in 2017. FRNSW is not currently undertaking these inspections since Transport for NSW changed lease agreement requirements.
- Providing comment to consent and regulatory authorities is conducted by FRNSW primarily for local councils and is not currently charged. On average FRNSW provided this service 65 times per year (between 2019 and 2021) to local councils relating to occupied buildings.

The number of services completed and charged does not match the number of applications received for the following reasons:

- Not all applications received are able to be completed by FRNSW due to staffing availability. For example, on average 9 per cent of IFSRs were completed and charged for over the four years between 2018 and 2021 (see table 7.3 below). FRNSW receives requests for an IFSR and then conducts a risk assessment which categorises IFSR requests into Category 1, Category 2 and Category 3 based on risk. The low charging rate reflects that FRNSW conducts (and charges) for approximately 9 per cent of IFSR requests.
- Services may be provided but not charged because FRNSW considered a charge would create a negative incentive and result in poorer community outcomes.

7.3 Number of applications received, and services charged — fire safety in built environment

Service type	Applications received				Services completed and charged			
	2018	2019	2020	2021	2018	2019	2020	2021
Initial fire safety report	534	577	566	541	52	48	69	27
Final fire safety report	460	564	508	423	161	279	363	328
Fire safety system report	186	399	521	514	13	41	139	231
Attendance at a fire safety meeting associated with development	60	83	96	75	42	48	84	58

29 Information provided by FRNSW.

Service type	Applications received				Services completed and charged			
	2018	2019	2020	2021	2018	2019	2020	2021
Advisory, assessment or consultancy services (FEBQs)	699	738	692	746	606	680	700	616
Advisory, assessment or consultancy services (non FEBQs)	NA	430	388	535	NA	NA	NA	NA[b]
Other inspections (incl. fire safety inspection for maritime lease)	0	0	0	0	0	0	0	0
Providing comment to consent and regulatory authorities [a]	0	72	56	66	0	72	56	66
Total	**1 939**	**2 433**	**2 439**	**2 365**	**874**	**1096**	**1355**	**1260**

[a] No charge applied to these services.

[b] An average of 62 AAC services (non FEBQs) were completed and charged each year. Data for each financial year is not available.

Note: Data for 2017 not provided.

Note: Assessment of Building Code of Australian Category 2 fire safety provisions are included in IFSR and FFSR and are not reported separately.

Source: Data provided by IPART and FRNSW.

Cost recovery rate for the Fire Safety Branch

An average of 39 per cent of the Fire Safety Branch's total costs were recovered from charges over the four years between 2018 and 2021 (table 7.4).

7.4 Overall cost recovery rate

	Unit	2017	2018	2019	2020	2021	Average
Total OPEX	$'000	6 230	6 242	6 921	7 732	7 442	7 084
Total Revenue	$'000	NA	2 367	3 026	3 324	2 316	2 758
Overall cost recovery rate	**Per cent**	**NA**	**38**	**44**	**43**	**31**	**39**

[a] NA for data that is not available.

Source: CIE based on data provided by FRNSW.

Cost drivers

The cost drivers for fire safety in built environment have been estimated based on a fully distributed approach. This approach allocates the total cost applicable to currently chargeable services based on average staff time spent on individual services. The same approach is applied for services which are not currently chargeable but for which a charge could be applied.

Chargeable monopoly services

Initial Fire Safety Reports

Under clause 144 (2) of the *EP&A Regulation 2000* a certifier must request an Initial Fire Safety Report (IFSR) from FRNSW for building works that includes a performance solution involving any Category 2 fire safety provision and other specified parameters and triggers, prior to issuing a construction certificate.

FRNSW considers each application by merit and allocates resources to prioritise performance solutions with greater risk and occupancy impact. No charge applies if FRNSW does not provide an IFSR.

The IFSR identifies whether FRNSW is satisfied that the performance solution will meet the performance requirements it intends to meet, fire hydrants are accessible, and hose couplings are compatible with FRNSW.[30]

Current charging framework

The charge for FRNSW to produce a IFSR is based on the estimated cost of development plus $180 for the assessment of each applicable Category 2 fire safety provision (table 7.5).[31]

7.5 Current charges for providing initial fire safety reports

Estimated cost of development	Charge amount
Up to and including $250,000	$500
$250,001 – $500,00	$500, plus an additional $0.40 for each $1,000 (or part of $1,000) by which the estimated cost exceeds $250,000
$500,001 – $1,000,000	$600, plus an additional $0.30 for each $1,000 (or part of $1,000) by which the estimated cost exceeds $500,000
$1,000,000 – $10,000,000	$750, plus an additional $0.20 for each $1,000 (or part of $1,000) by which the estimated cost exceeds $1,000,000
More than $10,000,000	$2,250, plus an additional $0.10 for each $1,000 (or part of $1,000) by which the estimated cost exceeds $10,000,000
Addition	Plus $180 for each assessment of a Category 2 fire safety provision.

Source: Fire Brigades Regulation 2014, Current version for 26 March 2021.

Number of applications received, chargeable services and total revenue received

The average number of requests for an Initial Fire Safety Report received by FRNSW per year between 2018 and 2021 was 555, of which on average 49 (8.8 per cent) were completed and charged per year (table 7.6).

The average annual revenue received from IFSR charges was $588 000 per year. This is equal to an average charge of $11 396 per chargeable IFSR.

7.6 Initial Fire Safety Reports

Initial Fire Safety Reports	Unit	2017	2018	2019	2020	2021	Average
Total applications received	No.	NA	534	577	566	541	555
Total chargeable services	No.	NA	52	48	69	27	49
Chargeable services proportion	Per cent	NA	9.7	8.3	12.2	5.0	8.8

30 Fire and Rescue NSW, *Initial Fire Safety Report,* https://www.fire.nsw.gov.au/page.php?id=9149 Accessed 21 October 2021.

31 Fire and Rescue NSW, *Initial Fire Safety Report,* https://www.fire.nsw.gov.au/page.php?id=9149 Accessed 21 October 2021.

Total revenue	$'000	NA	543	734	888	189	588
Average revenue per chargeable service	**$**	**NA**	**10 442**	**15 281**	**12 870**	**6 993**	**11 396**

Note: NA means data was not provided.

Source: Based on data provided by IPART and FRNSW.

Activities undertaken and average cost per IFSR

The estimated average time spent by FRNSW to complete an IFSR is 37.75 hours, comprising:

- 1 hour for administration
- 0.25 hours for risk assessment
- 36 hours for reporting
- 0.5 hours for follow-up (table 7.7).

7.7 Staff hours spent for an average IFSR

Staff grade	Admin	Risk assess	Prep work	Travel	Inspection	Reporting	Follow-up	Total
	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours
Engineer						24	0.5	24.5
Fire safety team leader						8		8
Fire safety manager		0.25				4		4.25
Admin	1							1
Total	**1**	**0.25**	**0**	**0**	**0**	**36**	**0.5**	**37.75**

Source: Information provided by FRNSW.

Applying the two sets of hourly rates in table 7.2, the total cost of an average IFSR is:

- $4 671 per IFSR (on average) based on hourly rates specified in Schedule 3 of the *Fire Brigades Regulations 2014*
- $5 244 per IFSR (on average) based on current staff cost per hour (table 7.8).

The estimated average cost for an IFSR is less than half of the average revenue per chargeable IFSR between 2018 and 2021 of $11 396 (see table 7.6).

FRNSW noted that the time taken (primarily reporting time) to complete an IFSR is highly variable due to variation in:

- report length — ranging from 50 to 500 pages
- number of performance solutions — ranging from a single issue to 20 or 30
- differing risk and complexity of building and issues.

Reporting time ranges from a minimum of 8 hours up to a maximum of 8 to 10 days. FRNSW also noted that the variation in staff time is not systematic in terms of categorisation following risk assessment, that is it is not always the case that a Category 1 IFSR will take longer than a Category 2 or Category 3.

7.8 Cost of average IFSR

Staff grade	Total hours	Cost based on hourly rates specified in Sch 3	Cost based on current staff cost per hour[b]
	Hours	$	$
Engineer	24.5	3 185	3 364
Fire safety team leader	8	880	1 138
Fire safety manager	4.25	531	647
Admin[a]	1	75	96
Total	**37.75**	**4 671**	**5 244**

[a] Hourly rate for admin is a weighted average across admin grades. Current hourly rate is not specified in Schedule 3 of Fire Brigades Regulation. Estimate of $75 is based on current staff cost per hour of $84 deflated by a factor of 0.90 which is the average across all member ranks reported in table 7.2.

[b] Cost based on current staff cost per hour includes 95 per cent utilisation rate. That is 5 per cent of staff time is spent on personal and rest breaks, and general staff admin.

Source: Information provided by FRNSW, Schedule 3 of Fire Brigades Regulation 2014 and CIE estimates.

Final Fire Safety Reports

Under clause 152 (2) of the *EP&A Regulation (2000)* a certifier is required to request a final fire safety report (FFSR) from FRNSW prior to issuing an occupation certificate for a building where Clause 144 applies.

The FFSR identifies whether FRNSW is satisfied that:

- building works comply with the performance solution in respect of the Category 2 fire safety provision that was the subject of the construction certificate
- fire hydrants in the fire hydrant system will be accessible for use
- all couplings in the fire hydrant system will be compatible with FRNSW.[32]

An inspection with at least two FRNSW staff will be conducted to assess whether the building works are satisfactory.[33]

Current charging framework

The charge to produce a FFSR consists of a charge for the cost of the inspection (table 7.9) and $180 for the assessment of each applicable Category 2 fire safety provision.

No charge applies if an FFSR is not produced by FRNSW.

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32 Fire and Rescue NSW, *Final fire safety r (FFSR) process. Fire safety guidelines: technical information D15/80994* https://www.fire.nsw.gov.au/gallery/files/pdf/guidesheets/Tech%20info%20sheet%20-%20Final%20fire%20safety%20report%20process.pdf Accessed 21 October 2021.

33 Fire and Rescue NSW, *Final fire safety r (FFSR) process. Fire safety guidelines: technical information D15/80994* https://www.fire.nsw.gov.au/gallery/files/pdf/guidesheets/Tech%20info%20sheet%20-%20Final%20fire%20safety%20report%20process.pdf Accessed 21 October 2021.

7.9 Current charges for inspection of premise for final fire safety report

Inspection type	Charge amount
Initial inspection	$215 for the first 2 hours (including travel time) Plus, additional $200 per additional hour, or part of an hour, of initial inspection.
Re-inspection	$430 for the first 2 hours (including travel time) Plus, additional $200 per additional hour, or part of an hour, of re-inspection.

Source: Fire Brigades Regulation 2014, Current version for 26 March 2021.

Number of applications received, chargeable services and total revenue received

The average number of requests for a Final Fire Safety Reports received by FRNSW per year between 2018 and 2021 was 489, of which over half (283) on average were completed and charged per year (table 7.10).

The average annual revenue received from FFSR charges between 2018 and 2021 was $313 000 per year. This is equal to an average charge of $1 089 per FFSR.

7.10 Final fire safety reports

Final fire safety report	Unit	2017	2018	2019	2020	2021	Average
Total applications received	No.	NA	460	564	508	423	489
Total chargeable	No.	NA	161	279	363	328	283
Chargeable services proportion	Per cent	NA	35.0	49.5	71.5	77.5	58.4
Total revenue	$'000	NA	149	377	439	285	313
Average revenue per chargeable service	**$**	**NA**	**927**	**1 349**	**1 209**	**870**	**1 089**

Note: NA means data was not provided.

Source: Based on data provided by IPART and FRNSW.

Activities undertaken and average cost per FFSR

The estimated average time spent by FRNSW to complete a FFSR is 16.25 hours, comprising:

- 1 hour for administration
- 0.25 hours for risk assessment
- 3 hours for preparatory work
- 4 hours for travel (based on 2 hours of travel for 2 staff members)
- 4 hours for inspection (based on 2 hours per inspection for 2 staff members)
- 3.5 hours for reporting
- 0.5 hours for follow-up (table 7.11).

7.11 Staff hours spent for an average FFSR

Final fire safety report	Admin	Risk assess	Prep work	Travel	Inspection/ meeting	Reporting	Follow-up	Total
	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours
Admin	1							1
Superintendent		0.25				0.5		0.75
Fire safety officer			2	2	2	2		8
Fire safety officer				2	2			4
Fire safety team leader			1			1	0.5	2.5
Total	**1**	**0.25**	**3**	**4**	**4**	**3.5**	**0.5**	**16.25**

Source: Information provided by NSW.

Applying the two sets of hourly rates in table 7.2, the total cost incurred by FRNSW for an average FFSR is:

- $1 521 per FFSR (on average) based on hourly rates specified in Schedule 3 of the *Fire Brigades Regulations 2014*
- $2 023 per FFSR (on average) based on current staff cost per hour (table 7.12).

The estimated average cost for an FFSR is higher than the average revenue received per chargeable FFSR between 2018 and 2021 of $1 089 (see table 7.10). This is partly explained by the current charging structure for FFSR which only recovers the cost of travel and inspection time. The current charge does not directly recover additional costs associated with administration, risk assessment, preparatory work, and reporting.

FRNSW noted there is minimal variation across FFSRs in terms of time spent preparing, inspecting and reporting. The minimum time is likely to be similar to the average time. However, travel time can vary substantially in regional locations.

7.12 Cost of average FFSR

Staff grade	Total hours	Cost based on hourly rates specified in Sch 3	Cost based on current staff cost per hour[b]
	Hours	$	$
Admin[a]	1	75	96
Superintendent	0.75	91	126
Fire safety officer	8	720	964
Fire safety officer	4	360	482
Fire safety team leader	2.5	275	356
Total	**16.25**	**1 521**	**2 023**

[a] Hourly rate for admin is a weighted average across admin grades. Current hourly rate is not specified in Schedule 3 of Fire Brigades Regulation. Estimate of $75 is based on current staff cost per hour of $84 deflated by a factor of 0.90 which is the average across all member ranks reported.

[b] Cost based on current staff cost per hour includes 95 per cent utilisation rate. That is 5 per cent of staff time is spent on personal and rest breaks, and general staff admin.

Source: Information provided by FRNSW, Schedule 3 of Fire Brigades Regulation 2014 and CIE estimates.

Fire safety system report

Clause 152A of the *EP&A Regulation 2000* requires a certifier to request a Fire Safety System Report (FSSR) from the Fire Commissioner for a class 2 or 3 building for building work that involved installing, extending or modifying a relevant fire safety system in the building, such as:

- A fire hydrant system
- A fire hose reel system
- A sprinkler system
- Any type of automatic fire suppression system of a hydraulic nature
- A fire detection and alarm system
- A mechanical ducted smoke control system.[34]

FRNSW prioritise applications and assess those that present the greatest risk and impact to the community.[35]

Where an FSSR is required, FRNSW to attend the building and provide the report to the certifier within 10 days. The FSSR is a written report specifying whether FRNSW is satisfied that relevant fire safety systems are capable of performing to the standard in the current fire safety schedule.[36] The FSSR is not a final inspection report on the compliance of the fire safety systems.[37]

Current charging

The charge for a FSSR is based on the rank of fire brigade member/s per hour of attendance at an inspection of the premises. A minimum of two fire brigade members will conduct the inspection for the purposes of the report. The inspection cost is time based and inclusive of travel time to and from the premises.[38]

A charge is not applied if an inspection is not undertaken and the FSSR is not provided.

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34 Fire and Rescue NSW, *Fire Safety System Report,* https://www.fire.nsw.gov.au/page.php?id=585 Accessed 21 October 2021.

35 Fire and Rescue NSW, *Fire Safety System Report,* https://www.fire.nsw.gov.au/page.php?id=585 Accessed 21 October 2021.

36 Fire and Rescue NSW, *Fire Safety System Report,* https://www.fire.nsw.gov.au/page.php?id=585 Accessed 21 October 2021.

37 Fire and Rescue NSW, *Fire safety system report (FSSR) process,* Fire safety guideline: technical information D17/51758 https://www.fire.nsw.gov.au/gallery/files/pdf/guidesheets/Tech%20info%20sheet%20-%20Fire%20safety%20system%20report%20process.pdf Accessed 21 October 2021.

38 Fire and Rescue NSW, *Fire safety system report (FSSR) process,* Fire safety guideline: technical information D17/51758 https://www.fire.nsw.gov.au/gallery/files/pdf/guidesheets/Tech%20info%20sheet%20-%20Fire%20safety%20system%20report%20process.pdf Accessed 21 October 2021.

Number of applications received, chargeable services and total revenue received

The average number of requests for a Fire Safety System Report received by FRNSW per year between 2018 and 2021 was 405, of which approximately a quarter (106) were charged on average per year (table 7.13).

The average revenue received from FSSR charges was $60 000 per year, however steadily increased from $10 000 up to $104 000 over the four-year period. The average of $60 000 revenue per year is equal to an average charge of $671 per chargeable FSSR.

7.13 Fire safety system report

Fire safety system report	Unit	2017	2018	2019	2020	2021	Average
Total applications received	No.	NA	186	399	521	514	405
Total chargeable	No.	NA	13	41	139	231	106
Chargeable services proportion	Per cent	NA	7.0	10.3	26.7	44.9	22.2
Total revenue	$'000	NA	10	33.2	90.9	104.2	60
Average revenue per chargeable service	$	NA	769	810	654	451	671

Note: NA means data was not provided.

Source: Based on data provided by IPART and FRNSW.

Activities undertaken and average cost per FSSR

FRNSW estimated the average time to complete a FSSR is 16.25 hours, equivalent to the average time for an FFSR, involving the same staff grades and allocation of time across staff (table 7.14). Likewise, for FFSR, FRNSW note there is minimal variation in time spent across FSSRs with the exception of travel time in regional NSW.

7.14 Average staff hours spent for an FSSR

Fire safety system report	Admin	Risk assess	Prep work	Travel	Inspection	Reporting	Follow-up	Total
	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours
Admin	1							1
Superintendent		0.25				0.5		0.75
Fire safety officer			2	2	2	2		8
Fire safety officer				2	2			4
Fire safety team leader			1			1	0.5	2.5
Total	**1**	**0.25**	**3**	**4**	**4**	**3.5**	**0.5**	**16.25**

Source: Information provided by NSW.

Applying the two sets of hourly rates in table 7.2, the total cost incurred by FRNSW for an average FSSR is:

- $1 521 per FSSR (on average) based on hourly rates specified in Schedule 3 of the *Fire Brigades Regulations 2014*
- $2 023 per FSSR (on average) based on current staff cost per hour (table 7.15).

The estimated average cost for an FSSR is more than double the average revenue received per chargeable FSSR between 2018 and 2021 of $671 (see table 7.13). The current charge for an FSSR is an hourly charge per staff member for time spent traveling and at the inspection. Additional costs of administration, risk assessment, preparation work, reporting and follow-up are not currently recovered.

The charge for an FSSR should match the charge for an FFSR because the activities and staff hours involved are the same (on average).

7.15 Cost of average FSSR

Staff grade	Total hours	Cost based on hourly rates specified in Sch 3	Cost based on current staff cost per hour[b]
	Hours	$	$
Admin[a]	1	75	96
Superintendent	0.75	91	126
Fire safety officer	8	720	964
Fire safety officer	4	360	482
Fire safety team leader	2.5	275	356
Total	**16.25**	**1 521**	**2 023**

[a] Hourly rate for admin is a weighted average across admin grades. Current hourly rate is not specified in Schedule 3 of Fire Brigades Regulation. Estimate of $75 is based on current staff cost per hour of $84 deflated by a factor of 0.90 which is the average across all member ranks reported.

[b] Cost based on current staff cost per hour includes 95 per cent utilisation rate. That is 5 per cent of staff time is spent on personal and rest breaks, and general staff admin.

Source: Information provided by FRNSW, Schedule 3 of Fire Brigades Regulation 2014 and CIE estimates.

Assessment of a Building Code of Australia Category 2

Current charging framework

FRNSW assess Category 2 fire safety provisions as part of either an IFSR or FFSR. As such the number of these services have not been recorded separately by FRNSW.

Currently a charge for each fire Category 2 safety provision triggered is included in the total charge for an IFSR or FFSR. Clause 46(3) prescribes the charge for each assessment of a Building Code of Australia Category 2 fire safety provision as $180.[39]

Attendance at fire safety meeting associated with development

An applicant can request a meeting with FRNSW on any fire safety matter outside of any formal assessment or consultation.

Current charging framework

The charge for attendance by a fire brigade member at a fire safety meeting is $200 per hour (or part of an hour)(table 7.16). A minimum of two members will attend the meeting.[40]

39 Fire Brigades Regulation 2014, Current version for 26 March 2021

40 Fire and Rescue NSW, *About the Fire Safety Branch,* https://www.fire.nsw.gov.au/page.php?id=9169 Accessed 21 October 2021.

The *Fire Brigades Regulation 2014* does not specify if this charge is per fire brigade member in attendance. FRNSW's website specifies the charge of $200 is per hour per fire brigade meeting.[41]

Currently there is no charge applicable to local government authorities and consent authorities for this service.[42]

7.16 Current charges for additional statutory fire safety services

Service	Charge
Attendance by the Commissioner or a fire brigade member at a fire safety meeting in connection with a development or proposed development	$200 per hour, or part of an hour, of the meeting

Source: Fire Brigades Regulation 2014, Current version for 26 March 2021.

Number of services provided, and revenue received

The average number of requested attendances at fire safety meetings associated with development per year was 79 between 2018 and 2021, of which almost three quarters (73.2 per cent) were charged (table 7.17).

The average annual revenue received for charges of attendance at fire safety meetings $40 000 per year. This is equal to an average charge per attendance of $659, equivalent to 3.3 chargeable hours per meeting attendance.

7.17 Attendance at fire safety meeting associated with development

Attendance at a fire safety meeting associated with development	Unit	2017	2018	2019	2020	2021	Average
Total number	No.	NA	60	83	96	75	**79**
Total chargeable	No.	NA	42	48	84	58	**58**
Chargeable services proportion	Per cent	NA	70.0	57.8	87.5	77.3	**73.2**
Total revenue	$'000	NA	21	26	65	48	**40**
Average revenue per chargeable service	$	NA	500	542	771	824	**659**
Average hours per chargeable service[a]	Hours	NA	2.5	2.7	3.9	4.1	**3.3**

[a] Based on rate of $200 per hour (highest rate per hour outlined in Part 1 of *Fire Brigades Regulations 2014.*

Note: NA means data was not provided.

Source: Based on data provided by IPART and FRNSW.

Activities undertaken and average cost per meeting attendance

The current charge for attendance at a fire safety meeting is based on the meeting time and does not recover additional costs incurred by FRNSW (e.g. travel). FRNSW estimate an average 12 hours is spent per meeting attendance, comprising:

41 Fire and Rescue NSW, *About the Fire Safety Branch,* https://www.fire.nsw.gov.au/page.php?id=9169 Accessed 21 October 2021.

42 Fire and Rescue NSW, *About the Fire Safety Branch,* https://www.fire.nsw.gov.au/page.php?id=9169 Accessed 21 October 2021.

- 0.75 hours for administration
- 0.25 hours for risk assessment
- 2 hours for preparatory work (based on two staff members preparing for 1 hour each)
- 4 hours for travel (based on 2 hours of travel for 2 staff members)
- 4 hours for inspection (based on 2 hours per inspection for 2 staff members)
- 1 hour for follow-up (table 7.18).

FRNSW note the meeting time could vary from 2 hours up to a maximum of 6 or 8 hours. Travel time can also vary.

7.18 Average staff hours spent per meeting attendance

Staff grade	Admin	Risk assess	Prep work	Travel	Meeting	Reporting	Follow-up	Total
	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours
Engineer			1	2	2		0.5	5.5
Fire safety team leader			1	2	2		0.5	5.5
Admin	0.75							0.75
Fire safety manager		0.25						0.25
Total	**0.75**	**0.25**	**2**	**4**	**4**	**0**	**1**	**12**

Source: Information provided by FRNSW.

Applying the two sets of hourly rates in table 7.2, the total cost incurred by FRNSW per meeting attendance, based on the estimated staffing hours is:

- $1 408 per 2-hour meeting based on hourly rates specified in Schedule 3 of the *Fire Brigades Regulations 2014*
- $1 647 per 2-hour meeting based on current staff cost per hour (table 7.19).

7.19 Average cost of meeting attendance (based on 2-hour meeting)

Staff grade	Total hours	Cost based on hourly rates specified in Sch 3	Cost based on current staff cost per hour[b]
	Hours	$	$
Engineer	5.5	715	755
Fire safety team leader	5.5	605	782
Admin[a]	0.75	56	72
Fire safety manager	0.25	31	38
Total	**12**	**1 408**	**1 647**

[a] Hourly rate for admin is a weighted average across admin grades. Current hourly rate is not specified in Schedule 3 of Fire Brigades Regulation. Estimate of $75 is based on current staff cost per hour of $84 deflated by a factor of 0.90 which is the average across all member ranks reported.

[b] Cost based on current staff cost per hour includes 95 per cent utilisation rate. That is 5 per cent of staff time is spent on personal and rest breaks, and general staff admin.

Source: Information provided by FRNSW, Schedule 3 of Fire Brigades Regulation 2014 and CIE estimates.

Provision of advisory, assessment or consultancy services

An applicant can request FRNSW to provide advisory, assessment or consultancy services on the statutory fire safety of any development, unless prescribed otherwise.

FRNSW noted this group of services is highly variable and encompasses a wide range of services, such as fire engineering brief questionnaires (FEBQs), written report requests, and various building types (e.g., railways, tunnels, groundworks, crown buildings, metro stations, warehouses with dangerous goods).

Fire engineering brief

An applicant should consult with FRNSW as a stakeholder in the performance-based design brief (PBDB)/fire engineering brief (FEB) process.[43]

Clause A2.2(4) of the *National Construction Code* requires consultation with relevant stakeholders during the performance-based design brief (PBDB). As stated on their website, FRNSW considers itself as a relevant stakeholder (under Clause A2.2(4)) in all Performance Solutions relating to fire safety for Class 2 to 9 developments within NSW.[44]

Current charging framework

This service is charged at $2 600 per day (or part of a day) spent by the Commissioner or a fire brigade member (table 7.20).

Currently there is no charge applicable to local government authorities and consent authorities for this service.[45]

An FEBQ response from FRNSW consists of a written report and the option of a meeting to discuss aspects of the advice given by FRNSW.

7.20 Current charges for additional statutory fire safety services

Service	Charge
Provision of advisory, assessment or consultancy services by the Commissioner or a fire brigade member (if fee not otherwise prescribed) in respect of: ▪ State significant infrastructure ▪ Crown building work ▪ Other development	$2600 per day

Source: Fire Brigades Regulation 2014, Current version for 26 March 2021.

43 Fire and Rescue NSW, *Performance-based design brief/fire engineering brief consultation,* https://www.fire.nsw.gov.au/page.php?id=9154. Accessed 10 November 2021.

44 Fire and Rescue NSW, *Performance-based design brief/fire engineering brief consultation,* https://www.fire.nsw.gov.au/page.php?id=9154. Accessed 10 November 2021.

45 Fire and Rescue NSW, *FRNSW Report (Other) Application,* https://www.fire.nsw.gov.au/page.php?id=9156 Accessed 21 October 2021.

Number of services and revenue received

Fire engineering brief questionnaires (FEBQs) make up the majority of advisory, assessment and consultancy services received and provided by FRNSW. The average number received each year between 2018 and 2021 was 719, of which an average of 651 were completed and charged (table 7.21). The average annual revenue from FEBQs was $1.76 million per year. This is equal to an average charge of $2704.

7.21 Fire engineering brief questionnaires (FEBQs)

Fire engineering brief questionnaires	Unit	2017	2018	2019	2020	2021	Average
Total number received	No.	NA	699	738	692	746	719
Total services provided and charged	No.	NA	606	680	700	616	651
Chargeable services proportion	Per cent	NA	86.7	92.1	101.2	82.6	90.6
Total revenue	$'000	NA	1 643	1 856	1 841	1 690	1 758
Average revenue per chargeable service	$	NA	2 712	2 730	2 630	2 744	2 704
Average days per chargeable service	Days	NA	1.04	1.05	1.01	1.06	1.04

Note: NA means data was not provided

Source: Based on data provided by IPART and FRNSW.

In addition to FEBQs, FRNSW received an average of 449 requests for other advisory, assessment and consultancy services per year and billed on average 62 per year (additional services were completed however not billed as these related to requests from Councils, other government departments, etc). Table 7.22 outlines the number of specific report types requested as part of advisory, assessment and consultancy services. On average between 2019 and 2021, FRNSW had the following requests:

- 130 reports related to certifier conditions
- 14 cladding review reports
- 8 reports related to conditions of consent
- 45 Environmental Impact Statement (EIS) reports
- 14 Fire Safety Studies
- 33 inspection/system tests
- 130 other reports (includes a mixture of report types, such as comments to DPIE on proposed conditions of approvals).
- 75 Secretary's Environmental Assessment Requirements (SEARs) reports

Cladding reports submitted by local council are not currently charged. Cladding reports submitted by others (e.g. consultants, certifiers etc) are currently charged. Charges apply for 'other reports' in certain cases.

7.22 Number of requests for other report types

Report type	Unit	2017	2018	2019	2020	2021	Average
Certifier condition	No.	NA	NA	73	116	202	130
Cladding review report	No.	NA	NA	11	0	31	14
Condition of Development Consent	No.	NA	NA	13	5	7	8

EIS report	No.	NA	NA	41	56	39	45
Fire Safety Study	No.	NA	NA	16	11	16	14
Inspection/System Test	No.	NA	NA	20	35	45	33
Other reports	No.	NA	NA	181	93	117	130
SEARs report	No.	NA	NA	75	72	78	75
Total	No.	NA	NA	430	388	535	449

Note: NA means data was not provided.

Source: Based on data provided by IPART and FRNSW.

Activities undertaken and average cost per advisory, assessment, or consultancy service

FRNSW identified two service categories within this broader service, FEBQs and other advisory, assessment or consultancy (AAC) services. The estimated average staff time required to complete each service is:

- 9.75 hours for an FEBQ (table 7.23)
- 37 hours for other advisory, assessment or consultancy service (table 7.24).

FRNSW note the following in terms of variation in time:

- FEBQs — FRNSW staff hours could vary in line with variation in length and complexity of an applicant's report. FRNSW staff hours approximately range from a minimum of 8 hours up to a maximum of 3 days.
- Other AAC services — reporting time is highly variable due to differences in:
  - report length, ranging between 50 to 500 pages
  - number of performance solutions ranging from a single issue to 20 or 30
  - differing complexity of buildings and issues.

  FRNSW staff could spend up to a maximum of 8 to 10 days on this service.

7.23 Estimated average staff hours spent per FEBQ

Staff grade	Admin	Risk asses	Prep work	Travel	Inspection /meeting	Reporting	Follow-up	Total
	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours
Admin	1.5							1.5
Fire safety manager		0.25						0.25
Fire safety team leader						2		2
Engineer						6		6
Total	**1.5**	**0.25**	**0**	**0**	**0**	**8**	**0**	**9.75**

Source: Information provided by FRNSW.

7.24 Estimated average staff hours per advisory, assessment, or consultancy service

Staff grade	Admin	Risk asses	Prep work	Travel	Inspection /meeting	Reporting	Follow-up	Total
	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours
Engineer						24		24
Fire safety officer						2		2

Fire safety team leader						2		2
Fire safety manager						8		8
Admin	1							1
Total	**1**	**0**	**0**	**0**	**0**	**36**	**0**	**37**

Source: Information provided by FRNSW.

Applying the two sets of hourly rates in table 7.2, the average cost incurred by FRNSW to provide an FEBQ is:

- $1 144 per FEBQ (on average) based on hourly rates specified in Schedule 3 of the *Fire Brigades Regulations 2014*
- $1 290 per FEBQ (on average) based on current staff cost per hour (table 7.25).

Applying the two sets of hourly rates in table 7.2, the average cost incurred by FRNSW to provide other AAC services is:

- $4 595 per other AAC (non-FEBQ) service (on average) based on hourly rates specified in Schedule 3 of the *Fire Brigades Regulations 2014*
- $5 134 per other AAC (non-FEBQ) service (on average) based on current staff cost per hour (table 7.26).

Between 2018 and 2021 the average revenue received was $2 704 per advisory, assessment or consultancy service (table 7.21). This is more than double the average cost of an FEBQ, and approximately 60 per cent of the average cost of other AAC services.

The charging framework should include a charge for FEBQ services separate to other AAC (non-FEBQ) services to reflect the differences in FRNSW's costs to provide these two services.

7.25 Cost of average FEBQ

Staff grade	Total hours	Cost based on hourly rates specified in Sch 3	Cost based on current staff cost per hour[b]
	Hours	$	$
Admin[a]	1.5	113	143
Fire safety manager	0.25	31	38
Fire safety team leader	2	220	284
Engineer	6	780	824
Total	**9.75**	**1 144**	**1 290**

[a] Hourly rate for admin is a weighted average across admin grades. Current hourly rate is not specified in Schedule 3 of Fire Brigades Regulation. Estimate of $75 is based on current staff cost per hour of $84 deflated by a factor of 0.90 which is the average across all member ranks reported in table 7.2.

[b] Cost based on current staff cost per hour includes 95 per cent utilisation rate. That is 5 per cent of staff time is spent on personal and rest breaks, and general staff admin.

Source: Information provided by FRNSW, Schedule 3 of Fire Brigades Regulation 2014 and CIE estimates.

7.26 Cost of average other AAC service

Staff grade	Total hours	Cost based on hourly rates specified in Sch 3	Cost based on current staff cost per hour[b]
	Hours	$	$
Engineer	24	3 120	3 296
Fire safety officer	2	180	241
Fire safety team leader	2	220	284
Fire safety manager	8	1 000	1 218
Admin[a]	1	75	96
Total	**37**	**4 595**	**5 134**

[a] Hourly rate for admin is a weighted average across admin grades. Current hourly rate is not specified in Schedule 3 of Fire Brigades Regulation. Estimate of $75 is based on current staff cost per hour of $84 deflated by a factor of 0.90 which is the average across all member ranks reported in table 7.2.

[b] Cost based on current staff cost per hour includes 95 per cent utilisation rate. That is 5 per cent of staff time is spent on personal and rest breaks, and general staff admin.

Source: Information provided by FRNSW, Schedule 3 of Fire Brigades Regulation 2014 and CIE estimates.

General inspection (previously fire safety inspection of maritime lease)

Conditions of lease agreements for marinas and waterfront facilities leased from land that is owned and administered by NSW Roads and Maritime Services (RMS) may require fire safety measures to be inspected by FRNSW.[46] FRNSW noted that as a result of TFNSW changing the lease agreement, FRNSW are not currently undertaking fire safety inspections for maritime leases.

FRNSW stated they may be required to conduct inspections for railway stations, tunnels, and other inspections currently captured under advisory, assessment and consultancy services, and/or inspection type services which sit outside of Section 152 and Section 152A.

Current charging framework.

The current charge for this service is based on the rank of the fire brigade member/s per hour of attendance at an inspection of the premises. A minimum of two fire brigade members undertake a maritime lease inspection.

Activities undertaken and average cost per general inspection

The estimated average time spent by FRNSW to complete a general inspection is 11.25 hours, comprising:

- 1 hour for administration
- 0.25 hours for risk assessment
- 1 hour for preparatory work
- 4 hours for travel (based on 2 hours of travel for 2 staff members)

46 FRNSW, *Request a Maritime Lease Inspection,* https://www.fire.nsw.gov.au/page.php?id=9164. Accessed 25 October 2021.

- 4 hours for inspection (based on 2 hours per inspection for 2 staff members)
- 1 hour for reporting (table 7.27).

7.27 Average staff hours per general inspection

Staff grade	Admin	Risk asses	Prep work	Travel	Inspection /meeting	Reporting	Follow-up	Total
	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours
Fire safety officer			1	2	2	1		6
Fire safety officer				2	2			4
Admin	1							1
Superintendent		0.25						0.25
Total	**1**	**0.25**	**1**	**4**	**4**	**1**	**0**	**11.25**

Source: Information provided by FRNSW.

Applying the two sets of hourly rates in table 7.2, the total cost of a general inspection is:

- $1 005 per inspection (on average) based on hourly rates specified in Schedule 3 of the *Fire Brigades Regulations 2014*
- $1 342 per inspection (on average) based on current staff cost per hour (table 7.28).

7.28 Cost of a general inspection

Staff grade	Total hours	Cost based on hourly rates specified in Sch 3	Cost based on current staff cost per hour[b]
	Hours	$	$
Fire safety officer	6	540	723
Fire safety officer	4	360	482
Admin[a]	1	75	96
Superintendent	0.25	30	42
Total	**11.25**	**1 005**	**1 342**

[a] Hourly rate for admin is a weighted average across admin grades. Current hourly rate is not specified in Schedule 3 of Fire Brigades Regulation. Estimate of $75 is based on current staff cost per hour of $84 deflated by a factor of 0.90 which is the average across all member ranks reported in table 7.2.

[b] Cost based on current staff cost per hour includes 95 per cent utilisation rate. That is 5 per cent of staff time is spent on personal and rest breaks, and general staff admin.

Source: Information provided by FRNSW, Schedule 3 of Fire Brigades Regulation 2014 and CIE estimates.

Are current charges cost reflective?

The current charges for specific monopoly services do not reflect average costs incurred by FRNSW (table 7.29).

7.29 Differences between charges and average costs for chargeable services

Monopoly service with specified charge	Current basis for charge	Average revenue per service	Average cost per service	Reasons for differences
		$	$	
Initial Fire Safety Report	Based on cost of development	11 396	5 244	▪ Cost of development is not a cost driver for IFSR. Cost drivers are: – length and complexity of report – number of performance solutions
Final Fire Safety Report	Two-tiered hourly rate plus Cat 2 assessment fee	1 089	2 023	▪ Two-tiered hourly rate recovers cost of travel and inspection time. ▪ Cost of admin, risk assessment, preparatory work and reporting are not currently recovered.
Fire Safety System Report	Hourly charge based on rank of staff member	671	2 023	▪ Hourly charge recovers cost of travel and inspection time. ▪ Cost of admin, risk assessment, preparatory work and reporting are not currently recovered.
Attendance at fire safety meeting	Hourly charge for meeting time	659	1 647	▪ Hourly charge recovers cost of travel and meeting time. ▪ Cost of admin, risk assessment, prep work, and follow-up are not currently recovered.
Provision of advisory, assessment or consultancy services	Daily rate	2 704 (FEBQ)	1 290 (FEBQ) 5 134 (Other AAC service)	▪ Not clear what current daily charge of $2600 was based on and what activities are included and for which staff grades. ▪ Two separate charges, FEBQ and Other AAC (non-FEBQ) service would reflect the cost structure more closely

Source: CIE.

Monopoly services without currently specified charges

FRNSW provides additional monopoly services but does not currently charge for them:

- providing comment to consent and regulatory authorities on a fire safety matter
- reactive compliance, i.e. assessing fire safety complaints relating to buildings or structures
- proactive compliance audits of fire safety
- issuing of compliance order
- lodgement of Emergency Plan.

Each are discussed below.

Providing comment on an occupied building to consent and regulatory authorities

As noted on FRNSW's website, consent and regulatory authorities, including local Council, water authorities and other Government agencies, may seek FRNSW's comment on any fire safety matter, development condition, compliance issue or Order applying to an existing occupied building.[47]

Current charging framework

FRNSW does not currently charge for this service.[48] However, provisions for a charge are available under section 42(c) of the *Fire and Rescue NSW Act 1989,* FRNSW can charge where the Commission or member of a fire brigade:

> furnishes any advice or report concerning fire prevention or protection, firefighting equipment or other matters.

The applicable charge is the hourly charge specified under section 48 of the *Fire Brigades Regulation 2014.*

Number of services providing comment on an occupied building

On average FRNSW provided this service 65 times per year between 2018 and 2021. FRNSW primarily provides this service to local councils and does not currently charge local councils for this service (table 7.30).

7.30 Providing comment on an occupied building

Activity	Unit	2017	2018	2019	2020	2021	Average
Matter on Occupied Building	No.	NA	NA	72	56	66	65

Note: NA means data was not provided.

Source: Based on data provided by IPART and FRNSW.

Average cost to provide comment on an occupied building

FRNSW estimate the average time spent to provide comment to consent and regulatory authorities is 12.25 hours, comprising:

- 0.75 hours for administration
- 1 hour for preparation work
- 4 hours for travel (based on 2 hours of travel for 2 staff members)
- 4 hours for inspection (based on 2 hours per inspection for 2 staff members)
- 2.5 hours for reporting (table 7.31).

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47 Fire and Rescue NSW, *Comment on an occupied building,* https://www.fire.nsw.gov.au/page.php?id=9163, Accessed 16 November 2021.

48 Fire and Rescue NSW, *Comment on an occupied building,* https://www.fire.nsw.gov.au/page.php?id=9163, Accessed 16 November 2021.

FRNSW note variation to the average staff hours is due to variation in travel time. Based on this estimate of average staff time, the cost per service is $1 469 based on current hourly staff costs (table 7.32).

7.31 Average staff hours spent providing comment to consent/regulatory authorities

Final fire safety report	Admin	Risk assess	Prep work	Travel	Inspection /meeting	Reporting	Follow-up	Total
	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours
Admin	0.75							0.75
Building surveyor				2	2	2		6
Senior building surveyor			1	2	2	0.5		5.5
Fire safety manager								0
Fire safety team leader								0
Fire safety officer								0
Total	**0.75**	**0**	**1**	**4**	**4**	**2.5**	**0**	**12.25**

Note: Fire safety manager, fire safety team leader and fire safety officer may be involved. No time allocated on average.

Source: Information provided by NSW.

7.32 Cost to FRNSW to provide comment to consent and regulatory authorities

Staff grade	Total hours	Cost based on hourly rates specified in Sch 3	Cost based on current staff cost per hour[b]
	Hours	$	$
Admin	0.75	56	72
Building surveyor	6	540	685
Senior building surveyor	5.5	715	712
Fire safety manager	0		
Fire safety team leader	0		
Fire safety officer	0		
Total	**12.25**	**1 311**	**1 469**

[a] Hourly rate for admin is a weighted average across admin grades. Current hourly rate is not specified in Schedule 3 of Fire Brigades Regulation. Estimate of $75 is based on current staff cost per hour of $84 deflated by a factor of 0.90 which is the average across all member ranks reported in table 7.2.

[b] Cost based on current staff cost per hour includes 95 per cent utilisation rate. That is 5 per cent of staff time is spent on personal and rest breaks, and general staff admin.

Note: Fire safety manager, fire safety team leader and fire safety officer may be involved. No time allocated on average.

Source: Information provided by FRNSW, Schedule 3 of Fire Brigades Regulation 2014 and CIE estimates.

Compliance activities

IPART identified FRNSW as the monopoly provide for a range of compliance activities:

- reactive compliance —— assessing fire safety complaints relating to buildings or structures
- proactive compliance — audits of fire safety

- issuing a compliance order — undertaking joint inspections with councils or consent authorities of the fire safety provisions of an occupied building[49]

Number of compliance activities conducted by FRNSW

On average FRNSW:

- investigated 558 fire safety complaints per year between 2019 and 2021
- conducted 60 proactive fire safety concern inspections per year between 2018 and 2021
- issued an estimated 40 compliance orders per year (table 7.33).

7.33 Compliance activities conducted by FRNSW

Compliance activity	Unit	2017	2018	2019	2020	2021	Average
Fire Safety Complaint	No.	NA	NA	585	558	532	558
Fire Safety Concern Proactive[a]	No.	NA	NA	81	83	17	60
Issue of compliance order	No.	NA	NA	NA	NA	NA	40

[a] This includes inspection programs with other government agencies and also concerns with fire alarm monitoring isolation.

Note: NA means data was not provided.

Source: Based on data provided by IPART and FRNSW.

Proactive or reactive compliance

FRNSW estimate the average time spent on either a proactive or reactive compliance check is 14.25 hours, comprising:

- 0.75 hours for administration
- 0.5 hours for risk assessment
- 1 hour for preparation work
- 4 hours for travel (based on 2 hours of travel for 2 staff members)
- 4 hours for inspection (based on 2 hours per inspection for 2 staff members)
- 4 hours for reporting (table 7.34).

FRNSW note variation to the average staff hours is due to variation in travel time. Based on this estimate of average staff time, the average cost per compliance check is $1 713 based on current hourly staff cost (table 7.357.36).

7.34 Average staff hours per compliance check

Compliance check	Admin	Risk assess	Prep work	Travel	Inspection /meeting	Reporting	Follow-up	Total
	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours
Admin	0.75							0.75
Building surveyor				2	2	3		7
Senior building surveyor		0.5	1	2	2	1		6.5

49 IPART, 2021, *Review of Fire and Rescue NSW's fees and charges: Issues Paper,* page 26.

Fire safety manager							
Fire safety team leader							
Fire safety officer							
Total	**0.75**	**0.5**	**1**	**4**	**4**	**4**	**14.25**

Note: Fire safety manager, fire safety team leader and fire safety officer may be involved. No time allocated on average.

Source: Information provided by NSW.

7.35 Cost to FRNSW per compliance check

Staff grade	Total hours	Cost based on hourly rates specified in Sch 3	Cost based on current staff cost per hour[b]
	Hours	$	$
Admin	0.75	56	72
Building surveyor	7	630	799
Senior building surveyor	6.5	845	842
Fire safety manager			
Fire safety team leader			
Fire safety officer			
Total	**14.25**	**1 531**	**1 713**

[a] Hourly rate for admin is a weighted average across admin grades. Current hourly rate is not specified in Schedule 3 of Fire Brigades Regulation. Estimate of $75 is based on current staff cost per hour of $84 deflated by a factor of 0.90 which is the average across all member ranks reported in table 7.2.

[b] Cost based on current staff cost per hour includes 95 per cent utilisation rate. That is 5 per cent of staff time is spent on personal and rest breaks, and general staff admin.

Note: Fire safety manager, fire safety team leader and fire safety officer may be involved. No time allocated on average.

Source: Information provided by FRNSW, Schedule 3 of Fire Brigades Regulation 2014 and CIE estimates.

Issue of compliance order

FRNSW estimate the average time spent to inspect and issue a compliance order is 9.25 hours, comprising:

- 0.75 hours for administration
- 4 hours for travel (based on 2 hours of travel for 2 staff members)
- 2 hours for inspection (based on 2 staff members each attending an inspection for 1 hour)
- 2.5 hours for reporting (table 7.36).

FRNSW note variation to the average staff hours is due to variation in travel time. Based on this estimate of average staff time, the average cost per compliance order issued is $1 096 based on current hourly staff cost (table 7.37).

7.36 Average staff hours per compliance order issued

Issue of compliance order	Admin	Risk assess	Prep work	Travel	Inspection/ meeting	Reporting	Follow-up	Total
	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours
Admin	0.75							0.75
Building surveyor				2	1	2		5
Senior building surveyor				2	1	0.5		3.5

Fire safety manager								
Fire safety team leader								
Fire safety officer								
Total	**0.75**	**0**	**0**	**4**	**2**	**2.5**	**0**	**9.25**

Note: Fire safety manager, fire safety team leader and fire safety officer may be involved. No time allocated on average.

Source: Information provided by NSW.

7.37 Cost to FRNSW per compliance order issued

Staff grade	Total hours	Cost based on hourly rates specified in Sch 3	Cost based on current staff cost per hour[b]
	Hours	$	$
Admin	0.75	56	72
Building surveyor	5	450	571
Senior building surveyor	3.5	455	453
Fire safety manager			
Fire safety team leader			
Fire safety officer			
Total	**9.25**	**961**	**1 096**

[a] Hourly rate for admin is a weighted average across admin grades. Current hourly rate is not specified in Schedule 3 of Fire Brigades Regulation. Estimate of $75 is based on current staff cost per hour of $84 deflated by a factor of 0.90 which is the average across all member ranks reported in table 7.2.

[b] Cost based on current staff cost per hour includes 95 per cent utilisation rate. That is 5 per cent of staff time is spent on personal and rest breaks, and general staff admin.

Note: Fire safety manager, fire safety team leader and fire safety officer may be involved. No time allocated on average.

Source: Information provided by FRNSW, Schedule 3 of Fire Brigades Regulation 2014 and CIE estimates.

Lodgement of Emergency Plans

Under clause 43 of the *Work Health and Safety Regulation 2017 (WHS Reg),* all workplaces are required to have an emergency plan. A copy of the emergency plan must be forwarded to FRNSW when the workplace uses, handles or stores:

- hazardous chemicals exceeding manifest quantities as prescribed in Schedule 11 of the *WHS Reg.* (clause 361 of the *WHS Reg*)
- hazardous chemicals exceeding threshold quantities as prescribed in Schedule 15 of the *WHS Reg.* or determined under Part 9.2 of the *WHS Reg.* to be a major hazard facility (clause 557 of *WHS Reg.*)
- more than 50kg net explosive quantity (NEQ) of explosives or 50 tonnes of security sensitive dangerous substances (clause 90 of *Explosives Regulation 2013).*[50]

The emergency plan is to be revised and re-submitted to FRNSW if circumstances of the premises change, including risks from adjoining properties.

50 Fire and Rescue NSW, *Lodge an emergency plan,* https://www.fire.nsw.gov.au/page.php?id=9159 Accessed 17 November 2021.

FRNSW may review the emergency plan at any time. FRNSW may provide recommendations on the content of the plan when the emergency plan does not adequately address all specific risks.[51]

There is currently no charge applied to this service.

Number of Emergency Plans received

On average FRNSW received 274 Emergency Plans for lodgement per year between 2019 and 2021 (table 7.38). FRNSW review a subset of these plans and in some cases provide recommendations. The number of Emergency Plans which were reviewed has varied substantially over the past 3 years, increasing from 7 in 2019 to 328 in 2021. FRNSW noted this variation related to staffing availability, where additional staff were able to assist with these particular reviews in the most recent years. Staffing availability will influence how many Emergency Plans are reviewed in future years.

7.38 Lodgement of Emergency Plans

Emergency Plans	Unit	2017	2018	2019	2020	2021	Average
Total Plans lodged	No.	NA	NA	248	173	401	274
Total Plans lodged and reviewed	No.	NA	NA	7	103	328	146

Note: NA means data was not provided.

Source: Based on data provided by IPART and FRNSW.

FRNSW estimate the average time spent to lodge and review (and provide recommendations in some cases) on an emergency plan is 2.5 hours, comprising:

- 1 hours for administration
- 1.5 hours for reporting (table 7.39).

On average 1 hour of administration time is spent on each emergency plan that is lodged, at a cost of $96 per plan (based on Admin staff grade in table 7.40).

An additional 1.5 hours of reporting time is spent on each emergency plan that is reviewed after lodgement. The total cost for lodgement and review of an emergency plan is $287 (table 7.40). FRNSW noted there is minimal variation on the estimated average time.

7.39 Average staff hours per lodgement and review of emergency plan

Lodgement of Emergency Plan	Admin	Risk assess	Prep work	Travel	Inspection/ meeting	Reporting	Follow-up	Total
	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours
Admin	1							1
Fire safety officer						1		1

51 Fire and Rescue NSW, *Lodge an emergency plan,* https://www.fire.nsw.gov.au/page.php?id=9159 Accessed 17 November 2021.

Fire safety team leader						0.5		0.5
Total	**1**	**0**	**0**	**0**	**0**	**1.5**	**0**	**2.5**

Source: Information provided by NSW.

7.40 Cost to FRNSW per lodgement and review of emergency plan

Staff grade	Total hours	Cost based on hourly rates specified in Sch 3	Cost based on current staff cost per hour[b]
	Hours	$	$
Admin	1	75	96
Fire safety officer	1	90	120
Fire safety team leader	0.5	55	71
Total	**2.5**	**220**	**287**

[a] Hourly rate for admin is a weighted average across admin grades. Current hourly rate is not specified in Schedule 3 of Fire Brigades Regulation. Estimate of $75 is based on current staff cost per hour of $84 deflated by a factor of 0.90 which is the average across all member ranks reported in table 7.2.

[b] Cost based on current staff cost per hour includes 95 per cent utilisation rate. That is 5 per cent of staff time is spent on personal and rest breaks, and general staff admin.

Source: Information provided by FRNSW, Schedule 3 of Fire Brigades Regulation 2014 and CIE estimates.

Administration of services

FRNSW conducts policy work that is directly related to the provision of their monopoly services. This work involves producing general information for each service type, templates and guidelines and technical information sheets. In many cases these are provided on FRNSW's website. Table 7.41 provides a high-level summary of the types of information provided on FRNSW's website by service type.

7.41 Administration activities specific to monopoly services

Service type	General information provided on website	Application form provided on website	Process Document provided on website
Initial Fire Safety Report	Yes	Yes	Yes
Final Fire Safety Report	Yes	Yes	Yes
Fire safety system report	Yes	Yes	Yes
Attendance at a fire safety meeting associated with development	Yes	Yes	No
Provision of advisory, assessment or consultancy services			
▪ FEBQ	Yes	Yes	No
▪ Other AAC services	Yes	Yes	No
General inspection (currently maritime lease inspections)	Yes	Yes	No
Providing comment on an occupied building to consent or regulatory authorities	Yes	Yes	No
Proactive compliance	No	No	No
Reactive compliance (fire safety complaint)	Yes	Yes	No
Issuing compliance order	Yes	Yes	No

Service type	General information provided on website	Application form provided on website	Process Document provided on website
Lodgement of Emergency Plan	Yes	Yes	No

Source: Fire and Rescue NSW, *Building fire safety,* https://www.fire.nsw.gov.au/page.php?id=9140, Accessed 16 November 2021.

FRNSW estimate the total annual cost for administration overheads specific to monopoly services for fire safety in built environment is $343 200 (table 7.42).

7.42 Total cost per year for administration overheads specific to monopoly services

Staff grades	Proportion of time	Total staff cost	
	Per cent	$ per week	$ per year
Clerk Grade 11/12	10	5 504	28 697
Clerk Grade 7/8	90	3 995	187 501
Clerk Grade 9/10	10	4 534	23 642
Engineer (Engineer Grade IV)	10	4 806	25 060
Engineer (Engineer Grade IV)	10	4 806	25 060
Engineer (Engineer Grade III/IV)	10	4 806	25 060
Fire safety team leader	10	5 404	28 179
Total annual cost			**343 200**

Note: Staff cost includes direct staff costs (superannuation, insurance, annual, sick, and public holiday leave entitlements and taxes), corporate overheads, and overheads for depreciation and maintenance of vehicles

Source: Information provided by FRNSW, and CIE estimates.

FRNSW estimates that 90 per cent of staff time on service overheads supports the following six service types — IFSRs, FFSRs, FSSRs, attendance at a fire safety meeting associated with development, Advisory, assessment or consultancy services (including other requests for report and excluding FEBQs) and FEBQs. The remaining 10 per cent is allocated across the other service types (table 7.43).

The cost of service overheads per application is estimated based on the total annual staff cost of $300 065 (table 7.42) multiplied by the percentage allocation divided by the average annual number of applications detailed in table 7.3. An alternative approach is to average the total cost of service overheads across all service types which is equivalent to a flat rate of $84 per service application.

7.43 Cost of service overhead by service type

Service type	Allocation proportion to service type	Average annual number of applications	Cost of service overhead
	Per cent	Number	$/application
Initial fire safety report	91.5	2702	116
Final fire safety report			116
Fire safety system report			116
Attendance at a fire safety meeting associated with development			116

Advisory, assessment or consultancy services (including other requests for report/inspection and excluding FEBQs)			116
FEBQs			116
Providing comment to consent and regulatory authorities	8	723	38
Reactive compliance check			38
Proactive compliance			38
Reactive/Proactive compliance - Order issued			38
Lodgements of Emergency Plans	0.5	274	6

Note: General inspections included in Other Advisory, Assessment or Consultancy services (excl. FEBQs) for this table.

Source: CIE estimates based on information provided by FRNSW.

Cost of fuel and tolls associated with travel

Some services require FRNSW to travel for site inspections or meetings. In terms of the full cost of travel, the current staff costs per hour in table 7.2 include direct staff costs (including superannuation, insurance, leave entitlements and taxes), corporate overheads, and overheads for depreciation and maintenance of vehicles. The cost of fuel consumption and tolls related to travel are not included in the current staff costs per hour.

The average cost of fuel for FRNSW's travel within greater Sydney and regional areas is estimated to be $9.14 and $15.30 per hour of travel, respectively, based on:

- average fuel cost per kilometre for a medium commercial vehicle (e.g. ford falcon) of $0.15 per kilometre[52]
- average speed of 59.6 kilometres per hour within Sydney[53] and 100 kilometres per hour in regional areas (table 7.44).

The average cost of tolls for FRNSW's travel within greater Sydney is estimated to be $1.34 per hour, based on:

- an average toll cost of $0.022 per vehicle kilometres travelled, based on:
  - total value of tolls collected in Sydney in 2018-19 of $983.6 million[54]
  - total vehicle kilometres travelled in Sydney in 2018-19 of 43.74 billion
- an average speed of 59.6 kilometres per hour within Sydney.

The average total cost of fuel and tolls is $10.49 per hour of travel within Sydney and $15.34 per hour of travel within regional NSW.

7.44 Estimated fuel and toll cost per travel hour

Cost item	Unit	Sydney	Regional
Average speed	km/hr	59.6	100

52 TFNSW, 2020, *Transport for NSW: Technical note on calculating road vehicle operating costs*, June 2020, page 29.

53 Australian Automobile Association, 2019, *Road congestion in Australia,* https://www.aaa.asn.au/wp-content/uploads/2019/06/Road-Congestion-In-Australia-2019-v.3.pdf, page 12.

54 Total value of tolls is reported for NSW, however all tolls are in the greater Sydney region.

Fuel cost	$/km	0.15	0.15
Estimated fuel cost	Per hour	9.14	15.34
Toll cost	Per trip	1.34	0
Total fuel and toll cost		**10.49**	**15.34**

Source: Australian Automobile Association, 2019, *Road congestion in Australia,* https://www.aaa.asn.au/wp-content/uploads/2019/06/Road-Congestion-In-Australia-2019-v.3.pdf, page 12; TFNSW, 2020, *Transport for NSW: Technical note on calculating road vehicle operating costs*, June 2020, page 29; Australian Automobile Association, 2021, *Transport Affordability Index,* https://www.aaa.asn.au/wp-content/uploads/2021/11/AAA_Affordability-Index-Q3-2021-FINAL.pdf, Accessed 23 November 2021.

Fixed and variable charges based on current costs

For the majority of its services, FRNSW conducts a risk assessment on all applications received. Services are completed based on the risk assessment and staffing availability. For example, on average 9 per cent of IFSR applications received per year are assessed and reported on by FRNSW.

Current charges only apply where a service is completed by FRNSW. As such administration and risk assessment costs incurred by FRNSW are not recovered for applications that are received and assessed, but not processed beyond the risk assessment stage.

Three potential charging structures based on average costs for each service are outlined below:

- fixed charge per application to recover administration and risk assessment costs — for applications received by FRNSW which are not processed beyond the risk assessment stage (table 7.45).
- fixed charge to recover the full cost incurred by FRNSW for completion of a service (table 7.46)
- combination of fixed and variable charges to recover the full cost, for service types which are considered to have high variation in staff requirements (table 7.48).

7.45 Administration and risk assessment costs – based on fixed cost per application

Service type	Admin and risk assessment	Cost of service overheads	Total
	$/application	$/application	$/application
Initial fire safety report	134	116	250
Final fire safety report	138	116	254
Fire safety system report	138	116	254
Attendance at a fire safety meeting associated with development	110	116	226
Advisory, assessment or consultancy services (including other requests for report and excluding FEBQs)	96	116	212
FEBQs (potentially new charging category)	181	116	298
General inspection	138	116	254
Providing comment to consent and regulatory authorities	72	38	110

Reactive compliance check	136	38	174
Proactive compliance	136	38	174
Reactive/Proactive compliance - Order issued	72	38	110
Lodgements of Emergency Plans	96	6	102

Source: CIE estimates based on information provided by FRNSW.

7.46 Full cost of service — based on fixed cost per application

Service type	Staff cost Admin/risk assessment	Cost of service overheads	Staff cost Excl. admin/risk assessment	Total
	$/service	$/service	$/service	$/service
Initial fire safety report	134	116	5 111	5 361
Final fire safety report	138	116	1 885	2 139
Fire safety system report	138	116	1 885	2 139
Attendance at a fire safety meeting associated with development	110	116	1 537	1 763
Advisory, assessment or consultancy services (including other requests for report and excluding FEBQs)	96	116	5 038	5 250
FEBQs (potentially new charging category)	181	116	1 108	1 406
General inspection	138	116	1 205	1 458
Providing comment to consent and regulatory authorities	72	38	1 397	1 507
Reactive compliance check	136	38	1 576	1 751
Proactive compliance	136	38	1 576	1 751
Reactive/Proactive compliance - Order issued	72	38	1 024	1 134
Lodgements of Emergency Plans	96	6	192	293

Source: CIE estimates based on information provided by FRNSW.

Staffing hours for certain services provided by FRNSW are highly variable, namely IFSR and other AAC services, with variation driven by:

- length of reports (ranging between 50 to 500 pages), and
- complexity of building and issues
- number of performance solutions (ranging from 1 solution to 20 or 30) (table 7.47)

These variations are not systematic making it difficult to assign a different charge based on risk classification, building class or another distinguishing category.

FRNSW's staffing hours are less variable for other services, such as final fire safety reports and fire safety system reports, with the exception of travel time. These other services also have variation in complexity of building and issues; however the variation has less impact on overall staff time compared to IFSRs.

7.47 Degree of variation in staffing hours by service

Monopoly service	Degree of variation	Factors causing variation
Charge currently specified in FB Regulation		
Initial Fire Safety Report	High	▪ Report length ▪ Complexity of building and issues ▪ Number of performance solutions
Final Fire Safety Report	Low	▪ Travel time ▪ Complexity of building and issues
Fire Safety System Report	Low	▪ Travel time ▪ Complexity of building and issues
Attendance at fire safety meeting	Medium	▪ Travel time ▪ Meeting duration
FEBQ	Medium	▪ Report length ▪ Complexity of building and issues ▪ Number of performance solutions
Provision of other advisory, assessment or consultancy (non FEBQ) services	High	▪ Report length ▪ Complexity of building and issues ▪ Number of performance solutions
General inspection	Low	▪ Travel time ▪ Complexity of building and issues
No charge currently specified in FB Regulation		
Providing comment to consent and regulatory authorities	Low	▪ Travel time ▪ Complexity of building and issues
Reactive compliance (assessing fire safety complaints)	Low	▪ Travel time ▪ Complexity of building and issues
Proactive compliance audits of fire safety	Low	▪ Travel time ▪ Complexity of building and issues
Issuing a compliance order	Low	▪ Travel time ▪ Complexity of building and issues
Lodgement of Emergency Plan	Low	▪ Length & complexity of Emergency Plan

Source: CIE.

7.48 Full cost of service — based on combination of fixed and variable charges for service types with high variation

Service type	Staff cost Admin/risk assessment	Cost of service overheads	Total fixed	Staff cost (excl. Admin/risk assessment)
	Fixed $/service	Fixed $/service	Fixed $/service	Variable $/hour/staff
Initial fire safety report	134	116	250	140
Provision of other advisory, assessment or consultancy (non FEBQ) services	96	116	212	140

Source: CIE estimates based on information provided by FRNSW.

Benchmarking again other jurisdictions

Victoria

The Regulatory Impact Statement for Proposed Fire Rescue Victoria (General Regulations 2020 provides an annual cost estimate of Fire Rescue Victoria's (FRV) fire protection services. Table 7.49 outlines FRV's average number of fire protection services per year and the estimated average cost per service based on the total annual cost per Function (table A.4 in Appendix A).

7.49 FRV's average number and cost per service

Area/Function	Average number/year	Average cost per service
	No.	$
Community Safety Technical Department		
Fire Engineering Briefs (IFEG 2005 Stakeholder Consultation)	606	608
Fire Engineering Reports/DG Risk Assessment Reports	437	390
Inspections – Building or DG sites	52	275
MHF Safety Case Reviews	528	521
Building Codes and Audits (BCA)		
Fire Protection report – Reg 309/129 Building Regulations 2018	328	545
Fire Protection report – Reg 1003/187 Building Regulations 2018	700	172
Letters of Advice (& pre application review) with regards to general fire protection correspondence	328	549
Inspections of buildings, fire protection systems and perimeter access roads	51	1488
Modification Section 160a Building Act 1993-MFB response to Building appeals Board (incl. Cladding related BAB applications)	224	924
Dangerous Goods		
Reports or letters of advice	224	924
Building Inspection and Compliance unit		

Inspections at Places of Public Entertainment (POPEs)	6	1201

Source: Rivers Economic Consulting, 2020, *Regulatory Impact Statement: Proposed Fire Rescue Victoria (General0 Regulations 2020.*

To provide an order of magnitude comparison between FRNSW and FRV, FRNSW's fire safety in the built environment services are roughly aligned to FRV's fire protection services in table 7.50. Overall, FRNSW's average cost per service is higher than FRV's, in some cases significantly higher (reactive compliance check, other AAC services, initial fire safety report, and final fire safety report). It is important to note this does not provide a direct comparison because it is not clear if FRVs estimated average cost per service captures all costs incurred by FRV, furthermore, it does not capture any differences in regulatory requirements across the two jurisdictions, which may influence the activities conducted and the time spent on activities.

Part of the difference is explained by FRNSW's higher hourly staff costs in the order of 20 to 60 per cent (table 7.51).

7.50 Comparison of FRV's and FRNSW's costs by service

Area/Function	Assumed NSW equivalent[a]	FRV's average cost per service[b]	FRNSW's average cost per service	Ratio of FRNSW's costs to FRV costs
		$/service	$/service	
Community Safety Technical Department				
Fire Engineering Briefs (IFEG 2005 Stakeholder Consultation)	FEBQ	638	1 225	1.9
Fire Engineering Reports/DG Risk Assessment Reports	IFSR/Other AAC services (non-FEBQs)	409	4 982[c]	12.2
Inspections – Building or DG sites	FFSR	288	1 921	6.7
MHF Safety Case Reviews	Other AAC services (non FEBQs)	546	4 877	8.9
Building Codes and Audits (BCA)				
Fire Protection report – Reg 309/129 Building Regulations 2018	Initial fire safety report	572	4 982	8.7
Fire Protection report – Reg 1003/187 Building Regulations 2018	Final fire safety report	180	1 921	10.7
Letters of Advice (& pre application review) with regards to general fire protection correspondence	Other AAC services (non FEBQs)	576	4 877	8.5
Inspections of buildings, fire protection systems and perimeter access roads	Fire safety system report	1 561	1 921	1.2
Modification Section 160a Building Act 1993-MFB response to Building appeals Board (incl. Cladding related BAB applications)	Other AAC services (non FEBQs)	969	4 877	5.0
Dangerous Goods				
Reports or letters of advice	Other AAC services (non FEBQs)	969	4 877	5.0
Building Inspection and Compliance unit				
Inspections at Places of Public Entertainment (POPEs)	General inspection	1 260	1 275	1.0

[a] CIE's approximate alignment of service categories.

[b] FRV's average cost per service indexed to 2021/22 dollars from reported 2018/19 dollars.

[c] Average cost for IFSR provided

Source: CIE analysis, information provided by FRNSW and Rivers Economic Consulting, 2020, *Regulatory Impact Statement: Proposed Fire Rescue Victoria (General0 Regulations 2020.*

7.51 Comparison of FRV's and FRNSW's staff costs per hour by service

FRV Staff Level	Hourly salary rate (incl. salary on-costs and overheads) [a]	Assumed NSW equivalent[b]	Staff cost (incl. salary on-costs and overheads)	Ratio of FRNSW's staff costs to FRV's staff costs
	$/hr		$/hr	
Commander (Cmdr)	108	Station commander/captain	135	1.2
MFB 6	96	Clerk Grade 9/10	123	1.3
Senior Station Officer (S.S.O)	90	Fire safety team leader	135	1.5
Station Officer (S.O)	84	Fire safety officer	114	1.4
MFB 5	80	Clerk Grade 7/8	108	1.4
MFB 4	61	Clerk Grade 5/6	95	1.6
MFB 3	49	Clerk Grade 3/4	80	1.6

[a] Calculated using the product of the hourly salary rate and an on-cost overhead cost multiplier of 1.4. The on-cost multiplier is provided by MFB and reflects the sum of the total salary on costs (i.e. $669,099) and overhead costs (i.e. $94,216) has a proportion of total salary costs (i.e. $1,803,551). Hourly salary rate indexed to 2021/22 dollars from 2018/19 dollars.

[b] CIE's approximate alignment of staff levels.

Source: CIE analysis based on information provided by FRNSW and Rivers Economic Consulting, 2020, *Regulatory Impact Statement: Proposed Fire Rescue Victoria (General0 Regulations 2020.*

Further information on charging structures for fire safety in built environment in Victoria and Queensland is provided in Appendix A.

8 Other services

Event charges

FRNSW can charge for attendance at events, such as the Royal Easter Show, musical festivals and sporting events. The number of events that it has historically attended is very low — 11 in 2017, 17 in 2018, 23 in 2019 and 13 in 2020. For these events, attendance is typically between 3 and 8 hours, but can be for periods of more than 1 day.

Revenue collected from events is also a very minor component of FRNSW revenue, and has been less than $300 000 per year since 2017.

Current charging policy

FRNSW can charge for requested attendance at events under Schedule 3 Part 1 of the Fire Brigade Regulations 2014. This allows FRNSW to charge for staff time for attendance at events, any good or service being hired or purchased to provide services and consumables.

The currently charging policy, *User pays charging policy — major and special events 2016,* provides the framework for more specific charging arrangements than set out in the regulations. This policy divides events into:

- Category A — Mega Events
- Category B — Hallmark Events
- Category C — Commemorative/Ceremonial Events
- Category D — Major Cultural/Sporting Events
- Category E — Minor Cultural/Sporting Events

Category A, B and C may be assessed on a whole-of-government basis, and DPC will determine if these are to be charged. For Category D and category E whether these are charged is determined by FRNSW.

The regulations indicate that FRNSW can charge for staff time, purchase or hire of goods and services and consumables. This appears to indicate that no charges could be levied for use of trucks. The charging policy indicates that FRNSW charges only for attendance, not for pre and post-event activities.

Charges can be waived by the Commissioner or their delegate.

Cost drivers

Attendance at events involves a number of steps, of:

- pre-event activities — administration, risk assessment and event planning, consultation with the event organiser and travel to the event. These are not charged currently
- during an event — supervision, attendance of staff and vehicles
- post-event activities — return travel and billing.

These steps are all the same regardless of the event category. However, the scale of the activity changes, with events from most costly to least costly being:

- Category A — Mega Events
- Category B — Hallmark Events
- Category C — Commemorative/Ceremonial Events
- Category D — Major Cultural/Sporting Events
- Category E — Minor Cultural/Sporting Events

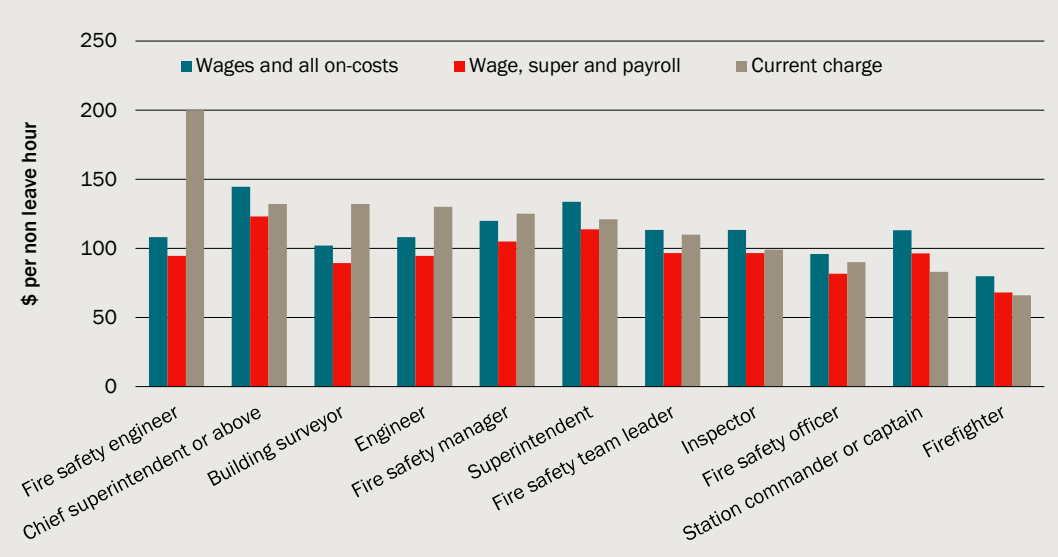
From a pure incremental or avoidable cost perspective, which is the approach set out in the relevant FRNSW charging policy, attendance at an event may have limited cost, because staff would otherwise have been at the station. It is not clear if staff and equipment can be used for fires outside of the event if they are at an event.

Do current charges reflect costs?

The current charges are based on staff time. The rates allowed are similar to the cost per non-leave hour allowing for superannuation and payroll tax, but not other on-costs such as insurance and training. For example, a firefighter is charged at $66 per hour, while the salary plus payroll and insurance per non-leave hour is $68 based on the current Award rates. Including insurance and training the cost per hour is $80 for a firefighter.

Across the different levels of staffing for which charges are specified there are some that are higher than costs, such as a fire safety engineer. However, the main staff used for events are firefighters and station commanders/captains, for which charges are below costs (chart 8.1).

8.1 Comparison of wages and charges



Data source: Current charges are from Schedule 3 Part 1 of the Fire Brigade Regulations 2014; costs are based on the Crown Employees (Fire and Rescue NSW Permanent Firefighting Staff) Award 2020. Insurance and training cosrts are based on data provided by FRNSW.

The current charges also do not cover the full costs related to pre-event and post-event activities. Nor do they attribute any costs related to use of trucks outside of purchases of fuel.

Benchmarks

Other NSW agencies provide major events services within a user charges framework.

- NSW Police (NSWPF) provide police at $119 per hour, and also charge for vehicle time.[55] this is a blended rate that does not change to reflect the various mix of ranks that may be deployed, and
- NSW Ambulance charges through a minimum rate of $1227 per ambulance with crew for a period of up to 3 hours on-site and $153 per additional half hour[56]

These charges are above those currently levied by FRNSW. The detail of when charges are applied and waived is not currently available.

NSW Police charges

NSWPF charge fees for user pays services to recover the full cost of the service, in accordance with NSW Treasury Guidelines for Pricing of User Charges. This includes NSWPF's attendance at special events that would otherwise draw from NSWPF's

55 NSW Police, User fees and charges schedule from 8 February 2021, https://www.police.nsw.gov.au/__data/assets/pdf_file/0003/742530/USER_CHARGES_2020_21_February_2021.pdf.

56 NSW Ambulance, Special and sporting events user charges 2019, https://www.ambulance.nsw.gov.au/__data/assets/pdf_file/0005/552479/Fact-Sheet-user-charges-sporting-events.pdf.

capacity to respond to community demands. The user charges scheme is a statutory scheme pursuant to:

- Part 11 of the Police Act 1990 (NSW)
- Section 8 of the Police Act 1990 (NSW) and
- Clause 144 of the Police Regulation 2015.

When charging for special events, only the avoidable cost is considered in the charge, with no allowance for overheads. Because special events are staffed by unrostered officers, there is no impact on NSWPF's capacity to response to core services.

Special Event charges are increased each year to reflect pay rises.

Charging principles

The time required for major events will be highly variable. For example, the Easter show requires firefighters time for over 10 days, while another event may be only several hours. Given this, the appropriate approach to charging is to levy a per hour charge.

Where FRNSW charges for services at major events, the costs per hour should be very similar to those set out for Hazmat incidents and false AFAs, depending on the crew at the major event.

Charges should also include the costs of planning, which would also be based on hours, and administration. FRNSW has indicated that there is on average 1 hour of administration time per major event, or $64 per event. However, an average for the planning stage cannot be estimated, as the resourcing need is too heavily dependent on the specifics of the event. However, this can be a substantial cost for FRNSW.

Attending fires outside fire districts

The Rural Fire Service of NSW has responsibility for responding to fires and motor vehicle accidents outside FRNSW's fire districts, but FRNSW may also respond to these as required. Some of these services are provided at the request of, or to assist, other agencies such as the Rural Fire Service (RFS).

Policy framework

Section 20 of the Fire and Rescue Act 1989 applies to the provisions for Fires outside FRNSW fire district. It states that:

- The Commissioner may permit any members of a fire brigade, with engines and appliances, to go beyond the limits of any fire district for the purpose of extinguishing any fire.
- In such a case the provisions of this Act apply to the fire and to anything done at the fire as if the fire were within a fire district.

If a fire occurs in any building, vehicle, vessel or property outside a fire district to which this applies, FRNSW can recover charges for the services. The Fire and Rescue NSW

Act 1989 under Section 40(2) and (4), authorises FRNSW to impose charges for certain services in the following ways:

- For responding to fire outside its fire district, FRNSW may charge the owner of the relevant property or vessel.
- Charges must not exceed 20 per cent of the value before the fire of the property (or a maximum charge if one is set)[57]

No maximum charges are currently prescribed by regulations.

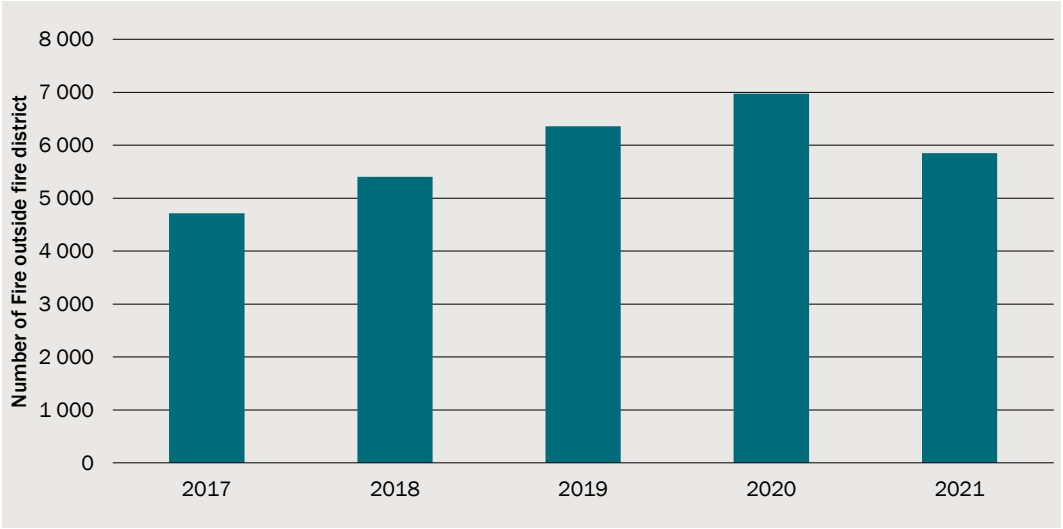
The Commissioner is entitled to recover, for services rendered by any members of a fire brigade in endeavouring to extinguish the fire or save life or property, however charges cannot exceed the prescribed charges.

FRNSW has indicated it very rarely charges for this service. There are specific incidents that FRNSW has charged for, such as the Kooragang Island subterranean fire (charged through the Natural Disaster Relief & Recovery Arrangement). The decision to charge for incidents outside of fire districts are individually assessed, and on the rare occasion incidents are charged, a cost recovery methodology is used to set the charge amount.

Number of services and revenue received

Table 8.2 shows the number of fire events FRNSW responded to outside its fire district in the last 5 years.

8.2 Number of Fire events outside fire district



Data source: FRNSW

57 Fire and Rescue Act 1989 Section 40

A Services and fees in other jurisdictions

False Automatic Fire Alarms

Table A.1 shows the summary of false AFA charges as they exist in other Australian jurisdictions other than NSW.

A.1 False AFA charges in other jurisdiction

State/ Territory	False alarm charge/fee	Additional detail around false alarm charges
VIC	**$587** Per 15 minutes per truck/ resource	Applicable for false alarms where no reasonable excuse has been given.
QLD	**$1 373.95**	First response within 60-days - no charge. Second and subsequent response within 60-days, or first and subsequent response to fire alarm system monitored by provider other than Queensland Fire and Emergency Services, charged for.
WA	**$1 337** (as of August 2021)	Applies after the third false fire alarm attendance to a premises in a financial year with invoice issued on fourth false fire alarm attendance and every false fire alarm attendance thereafter.
SA	A Class **$793** B Class **$566** C Class **$405**	**A Class** (very high risk): All areas/buildings, four floors and above; Oil and gas refineries/installations; Special target (very high hazard industrial/commercial/life risks). **B Class** (high risk): Industrial buildings/complexes not in A; Large shopping/commercial centres/supermarkets; Health Care Facilities not in A; Public buildings/grandstands/hotels/cinemas. **C Class** (significant, medium, low risk): Residential buildings; Small shopping/commercial buildings; Small industrial/public buildings up to 150 square metres; Brush fence fires.
NT	**$1 118**	Applies to all alarms. A waiver can be applied for if the owner believes the alarm could not reasonably have been avoided.
ACT	Residential **$285** 'Other' **$1 421**	One false alarm within 60-day period not charged for. Subsequent false alarms occurring within 60 days of the first alarm are charged for. Fee is not payable where the alarm could not have been prevented by reasonable maintenance of the alarm system. Fee is not payable where the alarm was activated by a circumstance beyond the reasonable control of the owner.
TAS	**$360**	Payable for third false alarm within 60 days.

Source: CIE.

Built environment

Victoria

A.1 Average transactions, annual revenue and average hours per transaction for BCA related fire protection services – 2016-17to 2018-18 — Victoria

Financial year	Transactions	Revenue	Estimated average hours per transaction
	No.	$	Hours
2018-19	1 649	471 515	2.4
2017-18	1 772	537 350	2.5
2016-17	1 566	471 598	2.5
Average	1 662	493 488	2.5

Source: Rivers Economic Consulting, 2020, *Regulatory Impact Statement: Proposed Fire Rescue Victoria (General0 Regulations 2020.*

A.2 Fees and charges schedule for the 2021/2022 financial year

Services provided by FRV	Minimum units & charges (incl. GST)	Maximum units & charges (incl. GST)
Meetings		
Attendance of a meeting by an FRV member that involves discussions and/or the preparation of written correspondence associated: ▪ with the design of a building or place of public entertainment ▪ with a proposed event associated with the conduct of public entertainment ▪ with the design of major community infrastructure ▪ prior to lodging a Regulation 129 or 187 report and consent application under the Building Regulations 2018.	10 fee units $150.33	30 fee units $450.90
Built Environment Reports		
Review of a trial concept design or a fire engineering brief and the subsequent preparation of a report prior to lodging a statutory Regulation 129 report and consent application	20 fee units $300.60	120 fee units $1803.60
Review of a fire engineering brief and the subsequent preparation of a report that does not require a statutory report and consent application to be obtained.	60 fee units $901.08	200 fee units $3,006.00
Review of a trial concept design, project scope and technical requirements, including other project specific documents as they relate to major community infrastructure projects	40 fee units $601.20	200 fee units $3,006.00
Review of a report and consent application and the preparation of either: ▪ A Regulation 129 report ▪ A Regulation 187(1) report	10 fee units $148.10	120 fee units $1,777.20
Inspections		
Inspection by an FRV member in relation to an application for a report and consent for a building or place of public entertainment that is the subject of a full, staged, or temporary application for Occupancy Permit	15 fee units $225.45	40 fee units $601.20

Services provided by FRV	Minimum units & charges (incl. GST)	Maximum units & charges (incl. GST)
Inspection and/or testing of fire prevention and suppression equipment by an FRV member within a building, place of public entertainment or major community infrastructure from a client that relate to non-statutory matters under the Building Regulations 2018		
Caravan Parks and Moveable Dwellings		
Conduct of a fire safety inspection and preparation of a report in relation to a caravan park	10 fee units $150.30	Client to be invoiced in quarter hourly increments in excess of minimum
Review of an emergency management plan		

Note: Unit of measure of 10 fee units per hour and 2.5 free units per quarter hour or part thereafter.

Source: Fire Rescue Victoria, *Fire Safety and Built Environment: Fees and charges schedule for the 2021/2022 financial year*.

Table A.3 outlines the hourly charge out rates by staff level used to estimate the cost of services provided.

A.3 Hourly charge out rates for staff involved in fire protection services – Victoria

Staff Level	Hourly salary rate	Hourly salary rate with salary on costs and overheads
	$	$
Commander (Cmdr)	72.42	103.07
Senior Station Officer (S.S.O)	60.37	85.92
Station Officer (S.O)	56.24	80.04
MFB 6	64.43	91.70
MFB 5	53.28	75.82
MFB 4	40.92	58.23
MFB 3	32.72	46.56

Source: Rivers Economic Consulting, 2020, *Regulatory Impact Statement: Proposed Fire Rescue Victoria (General0 Regulations 2020.*

A.4 Estimated annual cost of fire protection services – 2018-19 — Victoria

Area/Function/Task	FTE	Staff level	Average Annual hours	Hourly charge out rate	Annual cost
			No.	$	$
Community Safety Technical Department					
Fire Engineering Briefs (IFEG 2005 Stakeholder Consultation)					
Administration: Receive and log electronic application; Telephone inquiry/follow up with applicant; Create file and allocate job number; and Populate template	1	MFB 3	303	47	14 108

Area/Function/Task	FTE	Staff level	Average Annual hours	Hourly charge out rate	Annual cost
			No.	$	$
Supporting documentation review: Participation in conceptual design meeting or teleconference; and Desktop analysis review	2	MFB 6	1818	92	166 718
Site inspection: Only applies to existing buildings that are being altered or extended	1	MFB 6	76	92	6947
Report preparation & processing: Generate report; Update job tracking; and Send correspondence	2	MFB 6	1515	92	138 932
Reassessment: Desktop analysis of resubmission; Generate report; Update job tracking; and Send correspondence	1	MFB 6	455	92	41 680
Subtotal annual cost					**368 385**
Fire Engineering Reports/DG Risk Assessment Reports					
Supporting documentation review: Desktop analysis review; and Internal liaison with BC&A officer	1	MFB 6	983	92	90 168
Report preparation & processing: Generate internal report; Update job tracking; and Send internal/external correspondence	1	MFB 6	219	92	20 037
Reassessment: Desktop analysis of resubmission; Generate report; Update job tracking; and Send internal/external correspondence	1	MFB 6	656	92	60 112
Subtotal annual cost					**170 318**
Inspections — Building or DG sites					
Conduct joint on-site inspection with BC&A officer & generate internal report	1	MFB 6	156	92	14 306
Subtotal annual cost			**156**		**14 306**
MHF Safety Case Reviews					
Desktop analysis of Major Hazard Facility safety case review and report	1	MFB 6	150	92	13 756
Subtotal annual cost					**13 756**
BCA					
Fire Protection report — Reg 309/129 Building Regulations 2018					
Administration (telephone enquiry, application processing)	1	MFB 4	1200	58	69 879
Report preparation & processing	1	S.O	1200	80	96 052
Report forwarding and job tracking	1	S.O	180	80	14 408
Report sign off by Commander – email to client and job tracking	1	Cmdr	500	103	51 534
Admin processing and invoicing	1	MFB 4	740	58	43 092
Subtotal annual cost					**274 965**
Fire Protection report – Reg 1003/187 Building Regulations 2018					
Administration (telephone enquiry, application processing)	1	MFB 3	1000	47	46 562
Supporting documentation review	1	S.O	500	80	40 022
Report action & implementation – forwarding to client	1	S.O	750	80	60 032
Commander review	1	Cmdr	200	103	20 614

Area/Function/Task	FTE	Staff level	Average Annual hours	Hourly charge out rate	Annual cost
			No.	$	$
Admin processing and invoicing	1	MFB 3	250	47	11 640
Subtotal annual cost					**178 870**
Letters of Advice (& pre application review) with regards to general fire protection correspondence					
Pre application review / meeting average 700 contact p.a.	2	S.0	1500	80	120 065
Subtotal annual cost					**120 065**
Inspections of buildings, fire protection systems and perimeter access roads					
Site inspection booking	1	S.0	250	80	20 011
Site inspection and compliance follow ups	2	S.0	2000	80	160 086
Subtotal annual cost					**180 097**
Modification Section 160a Building Act 1993-MFB response to Building appeals Board (incl. Cladding related BAB applications)					
Administration — receipt of documentation and file governance	1	MFB 3	700	47	32 593
Supporting documentation review	1	S.S.0	300	86	25 776
Report preparation & processing	1	S.S.0	150	86	12 888
Administration — receipt of determination and processing	1	MFB 3	100	47	4 656
Subtotal annual cost					**75 913**

Source: Rivers Economic Consulting, 2020, *Regulatory Impact Statement: Proposed Fire Rescue Victoria (General0 Regulations 2020.*

Queensland

In Queensland, fees are set under the *Fire and Emergency Services Act 1990,* part 11 Charges for services.

Building inspection fees were set in 2008 following a review in 2007 of service fees charged for building fire safety and major infrastructure consultancy services. As a result of the review, existing fees were increased, and new fees instated. The reasons for the changes were stated as follows:

- QFRS is committed to delivering enhanced levels of customer service specifically tailored to meet Industry needs.
- Unprecedented growth in Queensland's building and development Industry has led to significant increase in demand for QFRS' building and major infrastructure fire safety services.
- Industry has indicated a requirement for additional QFRS resources to improve response times. Funds raised by fee changes will be directed towards improved service delivery.

- Extensive consultation with building industry professionals revealed that charges were outdated and not aligned with industry standards.[58]

Current charges are set out in the *Building Fire Safety Regulation 2008, QLD* and were updated in 2021 through the Fire and Emergency Services Legislation (Fees) Amendment Regulation 2021. Charges apply to the following services:

- deemed to satisfy assessment and inspection
- performance solution assessment and inspection
- reassessment
- multiple building application assessment and inspection
- additional inspection
- tit-out assessment and inspection
- meetings
- combustible cladding rectification
- marinas, temporary and special structure
- Change of class or use

Application of fees for assessment of building safety

Deemed to satisfy assessment and inspection

The *Building Fire Safety Regulation 2008 (QLD)* requires applications pay the base fee plus the sum total of the special fire service fees for QFES to assess and provide one inspection for a deemed-to-satisfy referral.

Special fire services (SFS) are fire safety installations required in buildings by the national Construction Code (NCC) dependent upon the classification, intended usage, size, location, etc. SFSs are outlined in the *Planning Regulation 2017*.

For example, the charge for a new building with a proposed floor area of 1000m^2 that requires fire hydrants, a sprinkler system and a fire detection and alarm system would incur the following fee:

- Base Fee = $3017.10
- Fire hydrants = 10% * $3017.10 = $301.71
- Sprinkler system = 15% * $3017.10 = $452.57
- Fire detection and alarm system= 40% * $3017.10 = $1206.84
- Total = $4978.22

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58 Queensland Fire and Rescue Service, *Fees Industry Flyer,* https://www.qbcc.qld.gov.au/sites/default/files/BuildingIndustryProfessionals_FeeImplementationFlyer.pdf Accessed 21 October 2021.

Performance solution assessment and inspection

For example, the charge for a new building with a proposed floor area of 1000m^2 that requires fire hydrants, a sprinkler system and a fire detection and alarm system, with 3 subsystems would incur the following fee:

- Assessment fee = 2 times (Base Fee + Special Fire Service Fee)
  = 2 * $4978.22
  = $9956.44
- Research fee for 2-5 subsystems = $2694.80
- Fire Engineering Brief Consultation Fee = $5155.80
- Total = $17807.03

A.5 QFRS fees for assessment and inspection of required special fire services

Service provided by QFRS	Fee ($)/Percentage (%)
Part 1 Base fee for stated building work	
Building work with a floor area not more than 700 sqm	1 675.20
Building work with a floor area more than 700 sqm but not more than 1,100 sq m	3 017.10
Building work with a floor area more than 1,100 sqm but not more than 1,500 sq m	3 690.85
Building work with a floor area more than 1,500 sqm but not more than 2,000 sq m	4 042.50
Building work with a floor area more than 2,000 sq m – Plus an additional charge for each 100 sq m above 2,000 sq m	4 218.30 31.90
Part 2 Percentages for calculating special fire services fees	
Fire mains (other than fire mains that connect only fire hose reels)	25%
Fire hydrants	10%
Sprinklers (other than wall-wetting sprinklers)	15%
Wall-wetting sprinklers	10%
Special automatic fire suppression systems (incl. foam, deluge and gas flooding systems)	10%
Fire detection and alarm systems (other than stand-alone smoke alarms not required to be interconnected or connected to a fire indicator panel)	40%
Fire control centres	10%
Stairwell pressurisation systems	40%
Air-handling systems used for smoke control	10%
Smoke and heat venting systems	10%
Smoke exhaust systems	40%
Emergency warning and intercommunication systems	20%
Emergency lifts	10%
Vehicular access for large isolated buildings	15%
Services provided under conditions imposed under section 79 of the Building Act	20%
Services required under the BCA, clause E1.10	20%
Additional assessment and inspection fees for fire engineering briefs	
Research fee for 1 subsystem	1 640.30

Service provided by QFRS	Fee ($)/Percentage (%)
Research fee for 2-5 subsystems	2 694.80
Research fee for more than 5 subsystems	5 390.25
Fire engineering brief consultation fee (includes up to 3 meetings)	5 155.80
Fire engineering design brief meeting fee; for the fourth and each subsequent meeting – for each hour, or part of an hour, of the meeting	644.20
Minor performance meeting fee	1 675.20
Other assessment and inspection fees	
Reassessment fee for assessing amended plans – for each hour, or part of an hour	644.20
General inspection fee for an interim inspection or inspection – for each hour, or part of an hour	644.20
Reinspection fee for first hour or part thereof	1 288.65
- - For each additional hour or part thereof	644.20

Source: Queensland Government, *Building Fire Safety Regulation 2008*.

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