



Draft charges for Fire and Rescue NSW  
attendance at false fire alarms

## Information Paper

December 2021



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The Independent Pricing and Regulatory Tribunal (IPART) is reviewing Fire and Rescue NSW (FRNSW)'s fees and charges. Our review will recommend which of FRNSW's services should have user charges; and how FRNSW should recover the costs of providing those services. Our recommendations will inform a review of the *Fire Brigades Regulation 2014* (FB Regulation), and any new charges should apply from 1 September 2022.

This information paper sets out our draft recommendations on charges for attendance at fire alarms that turn out to be false alarms. It is structured as follows:

- Section 1 summarises our draft recommendations on FRNSW's false alarm charges
- Section 2 provides an overview of FRNSW's response to false alarms and current charges
- Section 3 explains our approach in making our draft recommendations
- Sections 4 to 7 provide our assessment of the basis for charges for false alarm attendance, analysis of the efficient costs of responding to false alarms, and assessment of various charging options we considered
- Section 8 explains the potential impact of our draft recommendations.

This Draft Information Paper is supported by our [Draft Report](#) Separate Information Papers contain our analysis and draft recommendations on charging for [automatic fire alarm management](#), [attendance at hazardous material incidents](#), [fire safety activities in the built environment](#) and [FRNSW's other services](#).

### Have your say

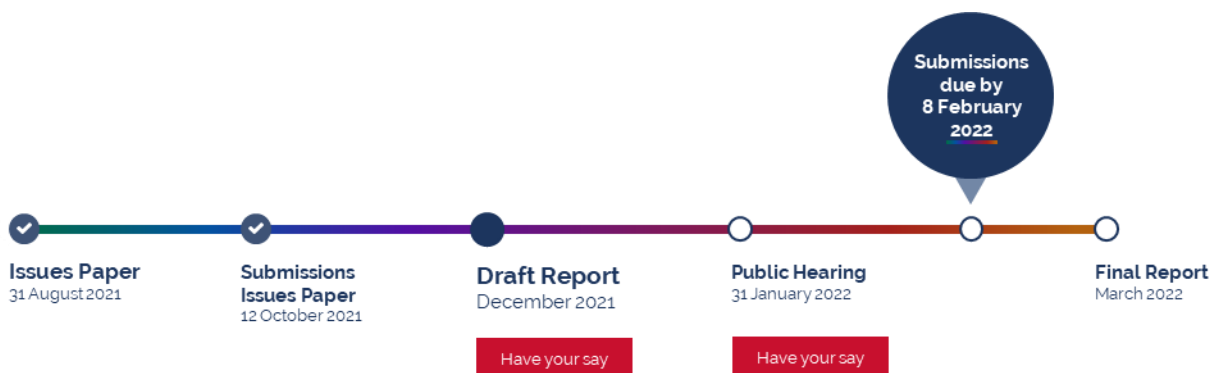
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### Timeline for this review



# 1 Summary of our draft recommendations

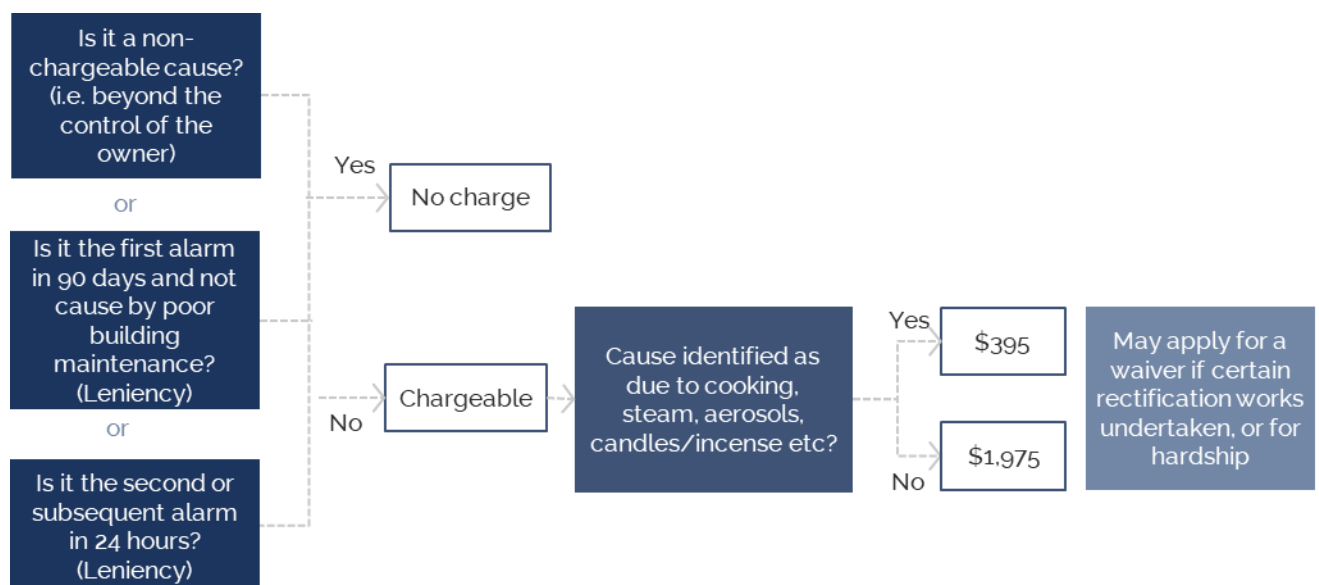
We recommend that FRNSW continue its current practice of levying a charge for some false alarms arising from automatic fire alarms systems (AFAs), but not for those raised through 'triple zero' calls.

We recommend an increase to the false alarm charge to \$1,975 (in \$2022-23) and a discounted rate of \$395 for some false alarms depending on the cause.

We also recommend changes to the way FRNSW applies leniencies for AFA false alarms, including that FRNSW:

- not charge the first false alarm in 90 days (existing policy is first false alarm in 60 days is not charged)
- exclude 'non-chargeable' alarm types from triggering leniencies, meaning more false alarms will be uncharged.
- exclude alarms caused by poor building maintenance from the 90-day leniency.

Figure 1.1 Summary of recommended pricing structure and prices



Further, we encourage FRNSW to continue to:

- undertake compliance activities to reduce safety implications from alarm owners tampering with alarms
- proactively engage with building owners to help reduce false alarms and expand this to assist occupants if requested.

FRNSW should also work with NSW Fair Trading to develop a fact sheet for occupants and building owners to clarify responsibilities, rights and options for appeal when building owners pass charges on to occupants.



## 2 FRNSW's response to false alarms and current charges

FRNSW must attend an alarm of fire<sup>1</sup> and it may recover charges specified in the FB Regulation if it is afterwards discovered that the alarm was false.<sup>2</sup>

While it may charge for all false alarms it attends, FRNSW only charges for false alarms that are generated by an automatic fire alarm system (AFA).

FRNSW also has a standard agreement with 3 Automatic Fire Alarm Service Providers (AFASPs), and the *Fire and Rescue NSW Act 1989* provides for FRNSW to set charges in this agreement for attendance at false alarms generated by AFAs.<sup>3</sup> Charges for attendance at AFA false alarms are imposed under those agreements, rather than under the FB Regulation.

### 2.1 FRNSW's response to alarms generated by AFAs

AFAs, sometimes known as 'back-to-base', are fire detection and communications systems designed to alert occupants and initiate quick responses by FRNSW in the case of fires.

They are a crucial component in fire detection for buildings. They are required in certain types of buildings, as prescribed by the National Construction Code, and are administered by councils.<sup>4</sup>



FRNSW must attend an alarm of fire, at speed. The response mostly involves 2 trucks and 8 fire-fighters.

Around 97% of all alarms generated by AFAs are unwanted alarms (around 48,000 a year).

### 2.2 Current false alarm charges

Charges for attendance at false alarms are intended to be an incentive for building owners to reduce the likelihood of false alarm occurrence.<sup>5</sup>

Currently, FRNSW only charges for false alarms generated by AFAs. This charge is currently set at \$1,600 and is levied under the agreement with automatic fire alarm service providers, subject to FRNSW's [Guideline No. 4: Application to Waive AFA False Alarm Charges](#). Those Guidelines set out two 'leniencies':

- the first alarm during any period of 60 days is not charged (with second and subsequent alarms to be charged)
- charging only for the first alarm in a 24-hour period.<sup>6</sup>

The Guidelines also set out further categories where charges may be waived, for example, a false alarm considered to have been beyond the building owner's control (e.g. due to environmental conditions like bushfire smoke). In practice, FRNSW charges for about 46% of automatic false alarms after applying leniencies. Around 2% of the charges levied are waived after the charge has been issued, usually resulting in a 75% refund. These charges have generated around \$36.8 million a year (\$2020-21, 5-year average), providing about 69% of the FRNSW's self-generated revenue, or 4.6% of total revenue.

The FB Regulation sets a charge for attending false alarms (other than those generated by automatic fire alarm systems), which is also currently set at \$1,600, to be levied unless:

- the false alarm was generated in the course of a test of which prior notice was given to a fire brigade officer and that test was properly carried out, or
- it is the first alarm during any period of 60 days (with second and subsequent alarms to be charged).<sup>7</sup>

FRNSW does not charge for false alarms that are not generated by an AFA.

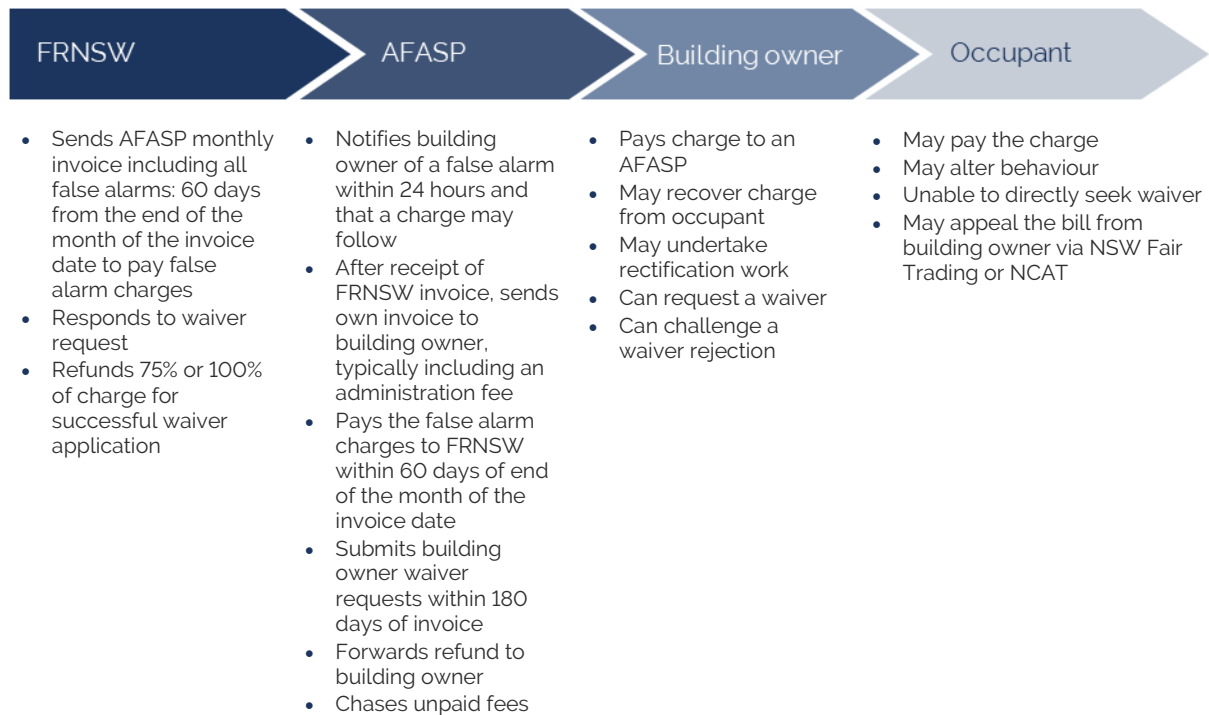
## 2.3 How the charges for AFA false alarms are levied

In the first instance, the charges are levied on the 3 AFASPs. FRNSW has a standard agreement with each of them, and AFASPs have individual contracts with building owners or managers.<sup>8</sup>

FRNSW bills an AFASP for false alarm charges and the AFASP passes the charges on to building owners. Building owners/managers may then pass the charges on to occupiers (such as hotel guests, aged care residents, tenants or students in student accommodation). FRNSW "does not support charges being passed on to individual occupants" noting that exceptions may apply,<sup>9</sup> but it cannot prevent this on-charging.<sup>10</sup>

Figure 2.1 sets out the roles and responsibilities of the various direct stakeholders.

Figure 2.1 Summary of false alarm charging roles and responsibilities



Source: FRNSW, Automatic Fire Alarm System Agreement, *Attachment B Schedule of AFASP Fees and Charges*, p 2 Guideline No. 4 - *Application to Waive AFA False Alarm Charges*, pp 2,4,8, 9; Information from FRNSW, September 2021.

## 2.4 Charging approaches in other jurisdictions

To inform our assessment, we also looked at charging approaches in other jurisdictions. We note that:

- Victoria has a variable charge which typically results in charges significantly higher than the current NSW charge.
- Other states and territories have one or more set fees ranging from \$285 to \$1,374.

All states include some leniencies and waivers so not all alarms are charged for. Table 2.1 summarises the charges in other states and territories.

Table 2.1 Summary of false alarm charges in other jurisdictions

Jurisdiction	Approach
Victoria	<b>Variable charge:</b> \$587 per 15 minutes that a fire fighting response vehicle is absent from its station. Reflects about 23% of the full cost per appliance.
Queensland	<b>Set fee</b> of \$1,373.95 in 2021-22. Recovers "less than 25%" of the cost of attending
South Australia	<b>3 set fees.</b> Set for 3 classes of premises based on risk <ul style="list-style-type: none"> <li>• A - \$886</li> <li>• B - \$633</li> <li>• C - \$452</li> </ul>
Western Australia	<b>Set fee</b> of \$1,337 in 2021-22.
ACT	<b>2 fees:</b> <ul style="list-style-type: none"> <li>• Commercial/Other non-residential building \$1,421.</li> <li>• Residential: \$285</li> </ul>
Tasmania	<b>Set fee</b> of \$368
Northern Territory	<b>Set fee</b> of \$1,145

Sources: Fire and Rescue Victoria '[False Alarm Charges](#)'; River Economic Consulting [Regulatory Impact Statement Proposed Fire Rescue Victoria \(General\) Regulations 2020](#), p 66; Queensland Fire and Emergency Services: '[Unwanted Alarm Activation](#)' accessed 17 December 2021; South Australian Government [The South Australian Government Gazette](#), 4 June 2020, p 3,154; Western Australia Department of Fire and Emergency Services, [False Fire Alarm Fee Fact Sheet](#); ACT Government [Emergencies \(Fees\) Determination 2021 \(ACT\)](#), Schedule 1, Items 289 and 291; Tasmania Fire Service: [Tasmania Fire Service Fees and Charges 2021/22](#), p 1; Northern Territory: [Fire and Emergency Regulations 1996 \(NT\)](#) and fee units are based on [Revenue Units Act 2009 \(NT\)](#), Territory Revenue Office [Revenue units](#).



### 3 How we made our recommendations

In making our draft recommendations on false alarm charges, we took the following steps:

1. Assess whether FRNSW attendance at false alarms should be charged and have charges set out in the FB Regulation based on the principles outlined in Box 3.1.
2. Determine the most appropriate charging structure for FRNSW based on 7 pricing principles outlined in Box 3.2.
3. Estimate the efficient cost to FRNSW of attending false alarms using a cost build-up approach using the approach set out in Box 3.3.
4. Determine the most appropriate level of the charges.
5. Consider the impact of our recommendations on FRNSW and its stakeholders.

This approach is broadly in line with our overall approach for the review that ensures we take account of all matters required by our Terms of Reference (see our Draft Report). In Sections 4 to 8, we describe how we have implemented these steps to reach our draft recommendations and findings.

#### Box 3.1 Principles for assessing user charges and having charges set out in regulation

##### **Principles for assessing which of FRNSW's services should have user charges**

We identified whether attending false alarm attendance should be subject to charges based on the following principles:

- Equity – Where identifiable individuals create specific demand for FRNSW's services, they should pay for them. This includes FRNSW's regulatory activities.
- Efficiency – Where charging for a service ensures scarce resources are better allocated, FRNSW should charge for it.
- Risk mitigation – Where charging for a service provides an incentive for individuals to mitigate risk, FRNSW should charge for it; and where FRNSW undertakes activities that better mitigate risk, FRNSW should charge for them.

##### **Principle for assessing if those charges should be set out in regulation**

Once we determined attending hazmat incidents should have user charges, then we decided whether its charges should be set out in regulation based on whether it is a monopoly service.

### Box 3.2 Principles for recommending charges

In recommending charges for attending false alarms, we assessed various options against the following pricing principles:

- Transparent – Key information about the charges should be readily available, such as the authority to charge, charging rates, and, where relevant, the basis of the charges
- Cost-reflective – Charges should reflect the efficient cost of providing the service
- Equitable – Charges should be equitable and affordable
- Create positive incentives – Where relevant, charges should incentivise risk mitigation
- Simple – Charges should be straightforward, practical, easy to understand and collect
- Flexible – Charges should be easily applicable to any new activities that FRNSW undertakes in future
- Consistent – Charges should be consistent between similar activities conducted by FRNSW and consistent with charges for similar activities conducted by other NSW agencies, where relevant.

### Box 3.3 Cost build up approach and capital allowance

We used a 'cost build-up' approach to estimate total efficient costs. Under this approach, we assess efficient operating, maintenance and depreciation costs. We then add an appropriate capital allowance to compensate FRNSW for committing capital investment to arrive at the total efficient costs.

To estimate the efficient operating, maintenance and depreciation costs:

- We analysed information provided by FRNSW on its historical and projected operating costs and activities
- We engaged consultants, the Centre for International Economics (the CIE), to review information provided by FRNSW and provide expert advice on efficient operating costs of attending false alarms.

We then added a capital allowance of 10% to account for a share of the cost of purchasing capital items such as buildings and equipment.

Our estimated capital allowance is based on the average Earnings Before Interest and Taxes (EBIT) margin for selected proxy industries, which are comparable to FRNSW in terms of its chargeable activities. These industries included fire and security alarm installation services, investigation and security services, fire protection services and hazardous waste hauling services. The Draft Report provides our analysis of capital allowance in more detail.

## 4 User charges for false alarm attendance

### Draft recommendations

10. FRNSW continue to charge for attending an alarm from an automatic alarm system that is later found to be a false alarm.
11. FRNSW continue its policy to not charge for false alarms that are not generated from an automatic fire alarm system.
12. FRNSW consider the merits of trialling charging for false alarms from privately monitored premises to assess its effectiveness at reducing the number of false alarms.
13. FRNSW continue to proactively engage with alarm owners to reduce false alarms from automatic fire alarm systems with a risk-based approach.
14. FRNSW work with NSW Fair Trading to develop a fact sheet for occupants and building owners to clarify responsibilities, rights and options for appeal when building owners pass charges on to occupants.

The first step in our approach for recommending FRNSW's fees and charges is to identify which FRNSW services should have user charges and have charges set out in the FB Regulation. The key principles we have applied are:

- whether there is an identifiable impactor who creates the need for the service
- whether a charge improves efficiency or risk mitigation.

We have assessed that FRNSW's attendance at false alarms generated from an AFA system should have user charges, primarily because a charge:

- Provides an incentive for alarm owners to mitigate the risk of false alarms occurring. False alarms create apathy to real alarms, and therefore increase risk to life in the case of a fire. False alarms also create risk to the broader society through fire brigade attendance under lights and sirens.
- May improve efficiency through better resource allocation to the extent that it reduces the number of false alarms that FRNSW attends.

In many cases, a false alarm from an AFA has an identifiable impactor who has caused the alarm (either deliberate or through neglect of responsibilities). In some cases, the cause is beyond the control of the owner (e.g. bushfire smoke ingress). In these cases, there is a weaker argument for charging and these are typically not charged under FRNSW policies.

Overall, there is a case to continue to charge for some incidents of false alarm from AFAs. These charges should be set out in the FB Regulation because FRNSW is the monopoly responder.

We consider that FRNSW should continue its policy of not charging for responses to alarms of fire that are generated from triple zero calls, because of the perverse incentives that may result from charging for these responses. However, we consider there may be merit in charging for false alarms from privately monitored premises and recommend that FRNSW consider trialling a charge in this scenario to assess its effectiveness in reducing the number of false alarms.

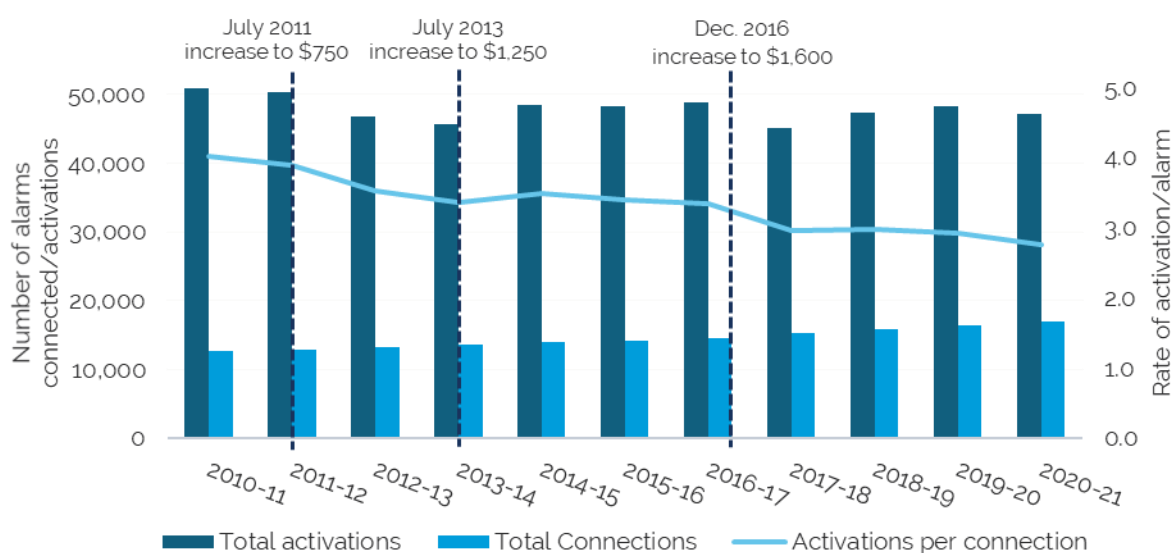
#### 4.1 Levying a charge may reduce the risk of further false alarms from AFAs

The rate of false alarms from AFAs has reduced over the last 10 years. In 2010-11, there were 4.0 false alarms per connection, which fell to 2.7 alarms per connection in 2020-21. We attribute this reduction to:

- the impact of false alarm charges
- engagement work that FRNSW undertakes
- improvements in technology.

Figure 4.1 shows the trend in connected AFAs, false alarm activations from AFAs, and the ratio of activations per connected alarm. It also indicates when the false alarm charge was increased. This figure shows that a steeper fall in the proportion of false alarms followed an increase in the false alarm charge in 2011 and 2016.

Figure 4.1 Trend in number of false alarms and total connections



a. The charge was \$500 in 2009-10 and 2010-11, and \$250 prior to that back to 1995.

Source: FRNSW data, *Fire Brigades Amendment (False Alarm Charge) Regulation 2009*, p 1 and cl. 3; *Fire Brigades Amendment (False Alarm Charge) Regulation 2011*, cl. 3; *Fire Brigades Amendment (False Alarm Charges) Regulation 2013*, cl. 3; *Fire Brigades Amendment (False Alarm Charge) Regulation 2016*, cl. 3; IPART analysis.

## 4.2 False alarms raised through triple zero calls

We recommend that FRNSW continue its policy of not charging for false alarms that are raised through 'triple zero' calls. This is primarily because imposing a charge could create a perverse incentive where people do not call in suspected fires. We also note the impactor in this scenario is less easy to identify.



## 5 Recommended charging structure and charging practices

The next step in our approach is to determine the most appropriate charging structure for false alarms from AFAs, based on our pricing principles.

Unlike other charges which are based on cost-recovery, the false alarm charge is intended foremost to incentivise the desirable behaviour in alarm owners to reduce false alarm occurrence.

This section provides:

- our draft recommendations on the structure of charges for false alarms from AFAs
- the charging options we considered
- our assessment against the pricing principles outlined in Box 3.2.

### Draft recommendations

- ✓ 15. FRNSW continue its current practice of not charging for a false alarm from an automatic fire alarm where the cause is beyond the control of the owner.
- ✓ 16. FRNSW implement a 2-tiered charging structure where there are different charges depending on the cause of the alarm.
- ✓ 17. FRNSW levy a discounted charge for false alarms where the cause is identified to be those in column 2 of Table 5.2.
- ✓ 18. FRNSW revise the stop-code descriptor 'Alarm activation due to workers/occupiers' activities to separate workers and occupiers' activities.
- ✓ 19. FRNSW take steps to help identify where there are design issues in buildings with automatic alarm systems causing false alarms from normal activities such as showering. This could include:
  - publishing information for occupants to reach out if they think that there is a design issue and take steps to follow up
  - tracking the numbers of this type of alarm and engaging with the building owner where there is a significant number of alarms
  - working with the Building Commissioner to investigate options to reduce this happening in new buildings.

## 5.1 Charging options we considered

The current single set charge for false alarms from AFAs has a very different impact depending on who ultimately pays.

Building owners, including some of those with the most false alarms such as hospitals, correctional facilities, and retail centres, are more likely to be able to absorb the charge at its current level. For these stakeholders to be incentivised to act to reduce future false alarms, the charge needs to be set at a level that exceeds the cost of any action required to reduce false alarms.

However, where the charge at its current level is passed through to occupants, including more vulnerable residents such as renters, students and aged care residents, it can have an excessive impact, given their lower capacity to pay. This may incentivise dangerous behaviour such as blocking smoke detectors, and defensive behaviours such as avoiding or minimising showering and cooking to avoid triggering an alarm. These behaviours affect residents' quality of life and, in many cases such as incidents of poor system design, residents are not in a position to address the underlying cause of a false alarm. The Property Owners Association and the Tenants' Union NSW noted these in our consultation.<sup>11</sup>



We assessed 5 charging structure options before reaching our draft recommendation, which best balances the pricing principles.

In addition to the status quo, we assessed 4 alternative charging options before finding that scaled charges based on the cause of the alarm better balance the key principles of incentivising desirable behaviour and equity. We considered:

1. scaled charges based on the cause of alarm
2. scaled charges based on the type of premises
3. scaled charges based on whether the building is primarily residential or non-residential.
4. a variable charge based on attendance time.

Our draft recommendation is discussed in detail below. Options 2-4 are described further and tested against the pricing principles in Appendix A.

## 5.2 Draft recommended charging option

After balancing several considerations, we recommend an amended charging structure, of 2 fees linked to the cause of the alarm. This option best meets our principles and provides an avenue to:

- identify responsibility for the false alarm and the ability to reduce future alarms, and
- set incentives while improving equity when the charges may be passed on to residential occupants.

We recommend a 2-tiered charging structure with the charges linked to whether the party responsible and best able to prevent further false alarms on the same cause is best classified as:

- the building (and alarm) owner, or
- a residential occupant.

We recommend a discounted charge be levied where a false alarm from an AFA is caused by residential occupants, to provide a more equitable incentive where the required action to reduce those alarms is for residential occupants to change their behaviour. This approach:

- acknowledges that sometimes the occupants are responsible for a false alarm
- reflects that some building owners pass on false alarm charges to occupants
- sets a charge more in line with an individual's capacity to pay
- may address the risk of people covering a detector to avoid the excessive higher charge, leading to better safety outcomes.

We also note there is no clear financial cost to alter behaviour where the cause of a false alarm is accidental such as burning food or spraying an aerosol too close to a detector. A charge should serve as a deterrent to this behaviour.



We do not support the passing on of charges where the building owner is best placed to rectify the issue to prevent future alarms.

Table 5.1 sets out our assessment of this structure against the pricing principles. For this charge, we consider that the key principles are to create the correct incentives and be equitable, which the draft recommended charging structure meets.

**Table 5.1 Assessment of draft recommended pricing structure against pricing principles**

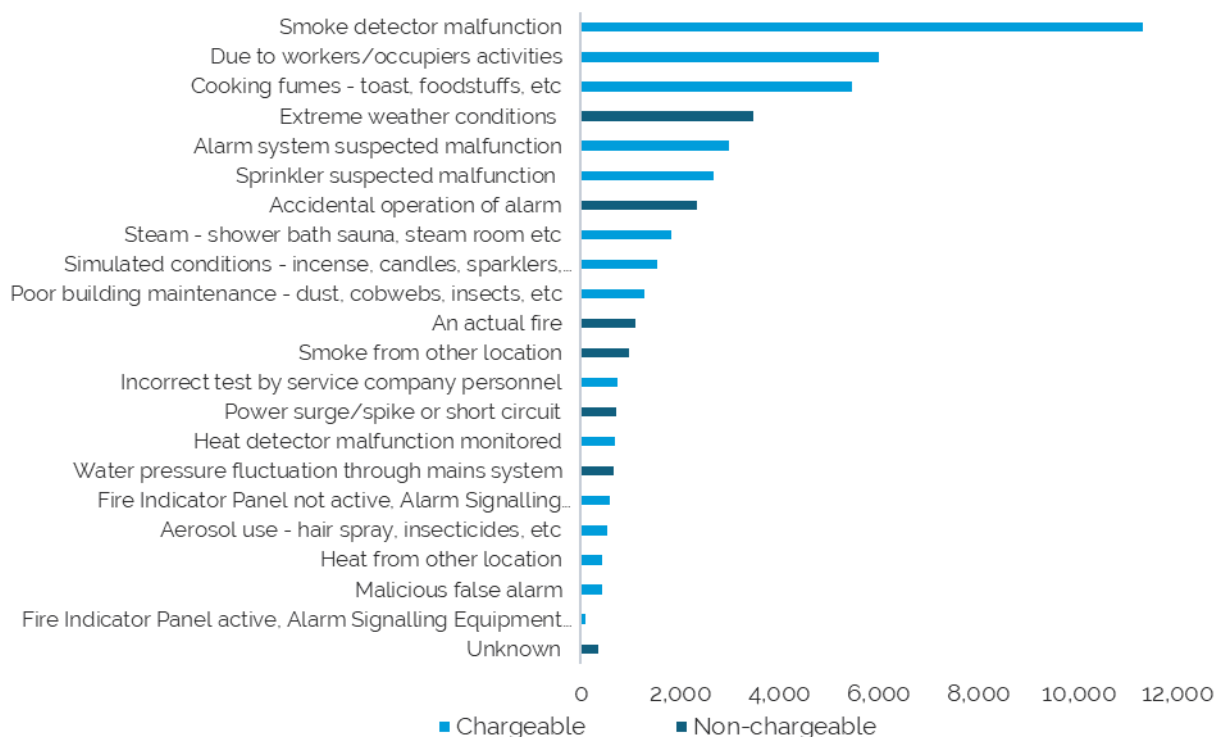
Principle	Does it meet the principle?	Comments
Equitable	✓	Targets responsible party's ability to pay.
Right incentives	✓	Aims to target the party responsible for the false alarm and able to prevent further false alarms with the same cause.
Cost reflective	✗	The structure is not linked to a cost driver.
Transparent	~	There is transparency as the charges will be clearly set out. The charge ultimately levied depends on fire-fighters' determination of the alarm cause.
Simple	~	The structure is simple to understand. However, it relies on identification of the alarm cause and FRNSW may need to amend some stop-codes for clearer implementation.
Flexible	✓	The structure allows FRNSW to develop alternative stop-codes to better clarify the responsible party. The waiver system provides additional flexibility to charging.
Consistent with other charges	✓	The 2-fees structure is consistent with many other charges in NSW. The basis of charging is not consistent with other FRNSW fees although we note that the South Australia Metropolitan Fire Service allocates leniencies differently based on alarm cause.

Our draft recommendation is different from the charging structures for responding to false alarms from AFAs in other jurisdictions. The 4 alternative structures we considered are set out and assessed in Appendix A.

### 5.2.1 This can be implemented using FRNSW's 'stop-codes'

Attending fire-fighters allocate one of 23 causes to an AFA attendance based on their investigation at the time of attending. These causes are known as 'stop codes'. Fifteen of the causes are currently 'chargeable', and these account for about 79% of false alarms. Figure 5.1 shows the annual average number of alarms by cause. The pale blue are chargeable causes, the dark blue are non-chargeable.

Figure 5.1 Number of alarms by identified cause, annual average



Source: FRNSW data; IPART calculations.

We agree with the current practice of not charging for false alarm attendance when the cause is beyond the control of the owner.

Table 5.2 set out the causes that we recommend be levied the full charge (Column 1) and those that should be offered a discount (Column 2).

Table 5.2 Which causes should be levied the full charge or discounted charge?

Column 1 – alarm causes where the full charge should be levied	Column 2 – alarm causes where a discounted charge should be levied
Malicious false alarm- includes malicious activation of Break Glass Alarm or Manual Control Point	Cooking fumes - toast, foodstuffs, etc
Incorrect test by service company personnel	Simulated conditions - incense, candles, sparklers, smoke machine, etc
Alarm activation due to workers/occupiers' activities	Alarm activation due to aerosol use - hair spray, insecticides, etc
Alarm activation due to poor building maintenance - dust, cobwebs, insects, etc	Alarm activation due to steam - shower bath sauna, steam room etc
Fire Indicator Panel active, Alarm Signalling Equipment not activated	
Fire Indicator Panel not active (includes system reset before arrival), Alarm Signalling Equipment activated	
Sprinkler suspected malfunction – e.g. loss of pressure and equipment faults	
Smoke detector malfunction monitored by fire service	
Heat detector malfunction monitored by fire service	
Alarm system suspected malfunction - includes fault in wiring, alarm panel, inadequate maintenance	
Heat detector operated - no fire - heat from other location	

Our draft recommendation would result in around 75% of false alarms being charged at the full rate, and around 25% at a discounted rate.

### 5.2.2 Systems being not fit-for-purpose mean that normal occupant activity can set off an alarm

We recommend a discounted false alarm charge for certain activity-based causes - such as showering, cooking and the use of aerosols – on the assumption that a residential occupant may be best placed to reduce the future alarms. However, we note that there are cases where activity-based causes may be best addressed through with a change in design rather than occupant behaviour.

We have heard from stakeholders that some alarms could arise from poorly placed or overly sensitive detectors which sound an alarm when occupants engage in normal activities.<sup>12</sup> These may require solutions such as changing the type of detector, moving a detector or improving ventilation or extraction fans. These actions are typically the responsibility of a building owner.

We recommend that FRNSW provides information to occupants and building owners that identifies where structural change could help to reduce false alarms. We also consider it could track the occurrence of this type of alarm and reach out to premises where there are repeat false alarms.

Further, FRNSW should work with the NSW Building Commissioner to improve the design of alarm systems in new buildings. We understand that FRNSW can currently make recommendations on designs that may not be fit-for-purpose, however the builder or developer is under no obligation to incorporate these recommendations where the design is compliant with the National Construction Code. A builder or developer has an incentive to reduce initial build cost and is not impacted by future false alarms.

FRNSW should also consider developing a way to test AFAs prior to building certification. For instance, Queensland Fire and Emergency Service runs a 'Pragmatic Cooking and Shower test'<sup>13</sup> that must be passed prior to building certification. FRNSW currently does not have the power to do this as it is not the certifying authority.

We consider that the cost of further resources for these activities should be recovered through user charges. At this stage we do not have sufficient information to understand whether FRNSW has the capacity to increase its engagement work or whether further resources are required.

### 5.2.3 FRNSW should revise the stop-codes to ensure they are clear

As outlined above, attending fire-fighters allocate one of 23 causes, known as 'stop-codes', to an AFA attendance based on their investigation at the time of attending. Most of the stop-code descriptions are easy to understand. However, some alarms that fall under the description 'Alarm activation due to workers/occupiers' activities could potentially be suitable for a discounted charge. FRNSW could consider whether this can be revised to provide more specificity.

Our draft decision is that false alarms under this cause should be charged at the full amount as a default, noting that there are other stop-codes that refer to residential occupant activities but not others that can be used for worker activities. We consider a building owner is responsible for the action of workers on a site, for instance to ensure they have protocols in place to prevent false alarms from AFAs.

## 5.3 Leniencies and waivers

Leniencies are mechanisms to provide the AFASP and/or the customer with the opportunity to have an alarm problem rectified while reducing the risk of incurring false alarm charges.<sup>14</sup> Waivers are an additional tool to encourage people to rectify issues that cause false alarms.

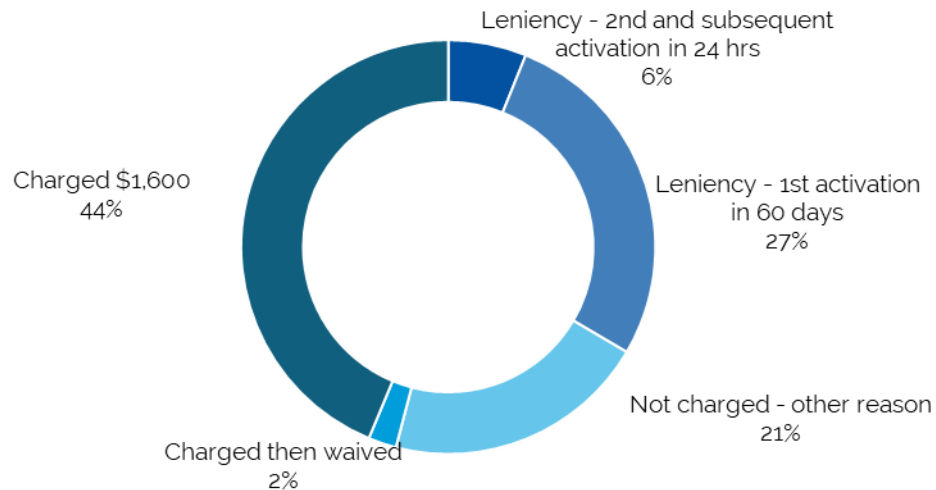
An average of 46% of false alarms are levied a charge. Those not charged are either identified as arising from a cause beyond the control of the owner (21%) or had one of 2 'leniencies' applied (33%). The two leniencies are:

- No charge for the first false alarm in any 60-day period. This include chargeable and non-chargeable causes. Subsequent false alarms can be charged.
- No charge for the second and subsequent false alarm in a 24-hour period.



Only one leniency is applied per alarm. Further, 2.2% (1,024) of false alarms had the charges waived.<sup>a</sup>

Figure 5.2 False alarms that are charged and not charged



Source: FRNSW, IPART analysis

## Recommendations

20. FRNSW continue to apply the '24-hour leniency', so that second and subsequent alarms in a 24-hour period are not charged; but amend its implementation to exclude non-chargeable causes of false alarms from triggering the 24-hour period.
21. FRNSW not charge for attending the first false alarm from an Automatic Fire Alarm in 90 days (current policy is 60 days). and:
  - exclude non-chargeable causes of false alarms from triggering the 90-day period
  - exclude false alarms that are caused by poor building maintenance from receiving this leniency.
22. FRNSW continue to waive false alarm charges where adequate steps are taken to prevent future false alarms under its current waiver policy.

<sup>a</sup> FRNSW can grant waivers can be granted upon application if a charge has been levied. They mostly require evidence of actions owners have taken to reduce future alarms but are also granted if a leniency should have been applied but was not. In most cases FRNSW refunds 75% of the charge, in a small number of cases, FRNSW refunds the full charge.

### 5.3.1 Most other jurisdictions also have some leniencies

Most other jurisdictions allow some 'free' alarms; only Tasmania allows more than NSW, others are the same or fewer. Table 5.3 sets out the leniencies in other states.

Table 5.3 Leniencies in other states

State	Charging practice
South Australia	Same as NSW - charge for 2 <sup>nd</sup> or subsequent in 60-days for some causes only. 4 <sup>th</sup> or subsequent if the cause is 'Incorrect testing by premise's staff or maintenance staff' Also has a 30-day grace period for new alarms.
ACT	Charge for 2 <sup>nd</sup> or subsequent in 60-days.
Tasmania	Charge for 3 <sup>rd</sup> and subsequent false alarm in a 60-day period.
Western Australia	Charge for 4 <sup>th</sup> and subsequent false alarms in a financial year. One charge per day (midnight to midnight)
QLD	Charge for 2 <sup>nd</sup> or subsequent in 60-days.
Victoria	No comparable leniency

Source: South Australia Metropolitan Fire Service, '[MFS Codes - Alarm Charging MFS Monitored, Waiver Form - MFS Monitored](#)' accessed 1 December 2021; ACT Government, '[Automatic Fire Alarms - Fees and Charges](#), 2021, p 2, accessed 1 December 2021. [Fire service Act 1979 \(Tas\)](#), s 109A, and IPART correspondence with Tasmania Fire Service; Government of Western Australia Departments of Fire and Emergency Services, '[False Fire Alarms - FAQs](#)', accessed 1 December 2021; Queensland Fire and Emergency services, '[Unwanted alarm activation FAQ](#)' accessed 1 December 2021.

### 5.3.2 Distribution of false alarms

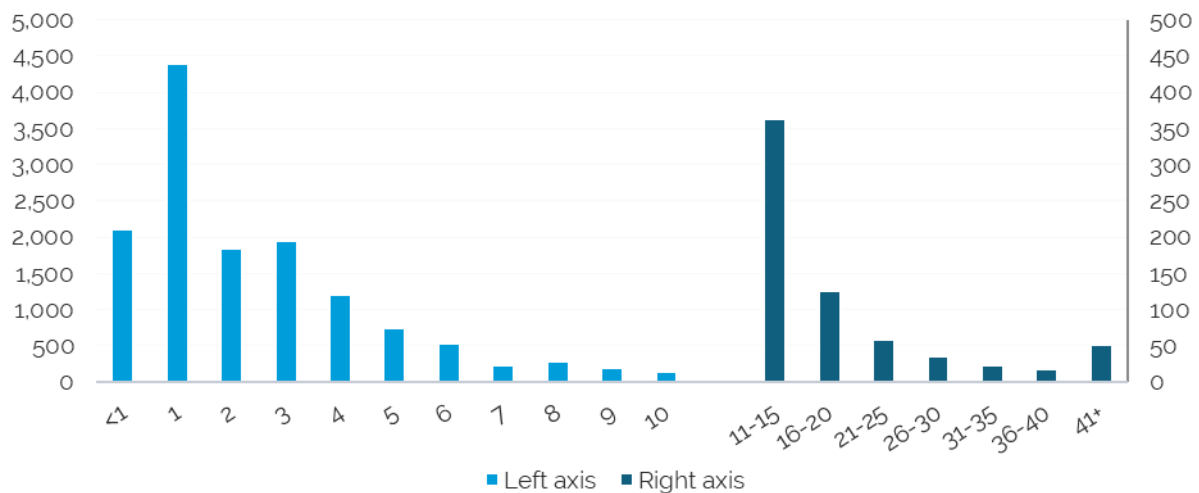
Many premises have a low occurrence of false alarms. Of the 14,281 systems that incurred a false alarm from January 2019- October 2021:

- 45% had one or fewer per year (on average)
- 89% incurred 6 or fewer per year.

We also note that 10% of the false alarms occur on 96 premises.

Figure 5.3 shows the distribution of false alarms for AFAs with a false alarm over the last 3 years. It shows the annual average of false alarms for these systems, and how many premises incurred that number.

Figure 5.3 Distribution of false alarms by number and premises



Source: FRNSW data

### 5.3.3 We support retaining the 24-hour leniency

The 24-hour leniency policy allows a building owner to address the cause of a false alarm within 24 hours without incurring a charge. It acknowledges that some time is needed to rectify many of the issues that cause false alarms. A faulty or dusty detector, for example, can set off repeated false alarms and be rectified relatively quickly. We consider the 24-hour leniency is a fair approach, noting that additional charges would not necessarily increase the speed of rectification.

When the leniency is applied, it does not link the cause of the alarm. Instead, any false alarm from within the next 24-hours is uncharged. We found that 53% of the 'free' alarms under this policy were due to the same cause that triggered the 24-hour free period. The remainder - around 1,382 a year or 3% of all alarms - are 'free' which may not be in line with intent of the policy. However, the additional complexity of linking the leniency to the cause of the alarm may outweigh the benefit.

### 5.3.4 We recommend excluding non-chargeable alarms from application of leniencies

In practice, both the 24-hour and 60-day leniencies apply to 'non-chargeable' alarms. That is, a false alarm that is excluded from charges due to the cause of alarm, such as a power surge, could:

- trigger the beginning of a 24-hour period where no further alarms are charged, or
- be counted as the 'free' alarm at the start of a 60-day period.

Including non-chargeable alarm causes is counter to the purpose of the leniency, that is, to identify the cause of an alarm within the owner's control and provide time for them to rectify issues. It has the perverse outcomes of potentially allowing additional 'free' alarms under the 24-hour rule, and of preventing the owner from accessing a 'free' alarm under the 60-day rule.

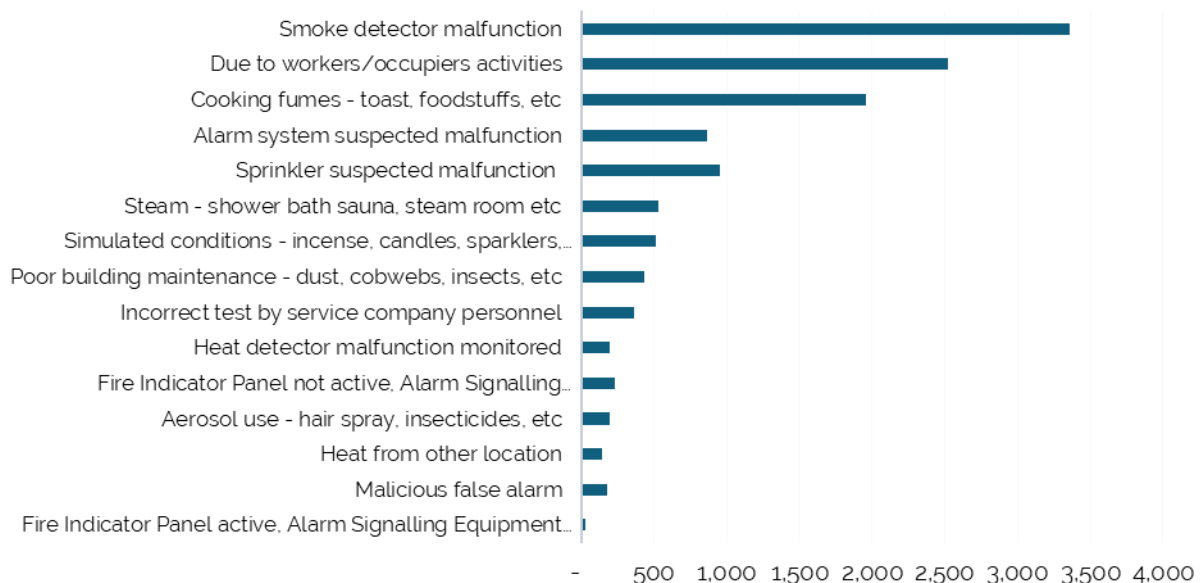
Hence, all non-chargeable alarms should be excluded from application of the leniencies. We estimate that this change, all else equal, would reduce the number of chargeable false alarms from AFAs by around 4%.<sup>b</sup>

### 5.3.5 On balance, we recommend a 90-day leniency

FRNSW currently applies a '60-day leniency'. This allows 1 free false alarm per 60 days, or up to 6 per year for those systems with recurring false alarms. In principle, the first alarm should alert the owner if there is an issue so they can set about rectifying it before there is a repeat alarm for the same reason. This helps target the charges to the more systematic issues or where rectification action is not taken.

The main reason for levying a false alarm charge is to incentivise alarm owners to adequately manage their system to prevent false alarms. There is a stronger argument to charge (i.e. not be lenient) when false alarms are repeated and the cause is systemic, such as when there are repeated faults or behaviours that could otherwise be prevented. When the false alarms are one-off or infrequent in nature, or for less predictable causes, the argument for a charge is weaker. Figure 5.4 shows the number of false alarms that were given leniencies by 'chargeable' cause (annual average from January 2019- October 2021).

Figure 5.4 False alarms that were given leniencies by 'chargeable' cause



Note: FIP means Fire indicator Panel, ASE means Alarm Signalling Equipment  
Source: FRNSW data, IPART analysis

<sup>b</sup> This is approximate due to follow-on impacts with the application of leniencies.

In our view, there should be a level of leniency for infrequent false alarms. This acknowledges that some causes of false alarm within the responsibility of the alarm owner are more difficult to prevent but should be rectified as soon as possible to prevent further alarms. We note that some causes of alarms are already exempt from charging, when the cause is deemed to be beyond the control of the owner.

### **Reducing the number of 'free' false alarm responses per year**

We considered whether the 60-day leniency is appropriate or whether this should be extended to 90-days, meaning fewer 'free' alarms per year.

Offering fewer leniencies would provide a stronger incentive for owners to avoid false alarms. These would typically apply to premises with recurring false alarms throughout the year, which is where the stronger incentive should be targeted.

We estimate that moving to a '90-day leniency' or up to around 4 free false alarm responses per year, could make around 6% more alarms subject to charges. Coupled with our draft recommendation to remove non-chargeable false alarms from leniencies (explained above) this would mean a more moderate increase in chargeable alarms, which we estimate at around 2%.<sup>c</sup>

### **Distribution of leniencies**

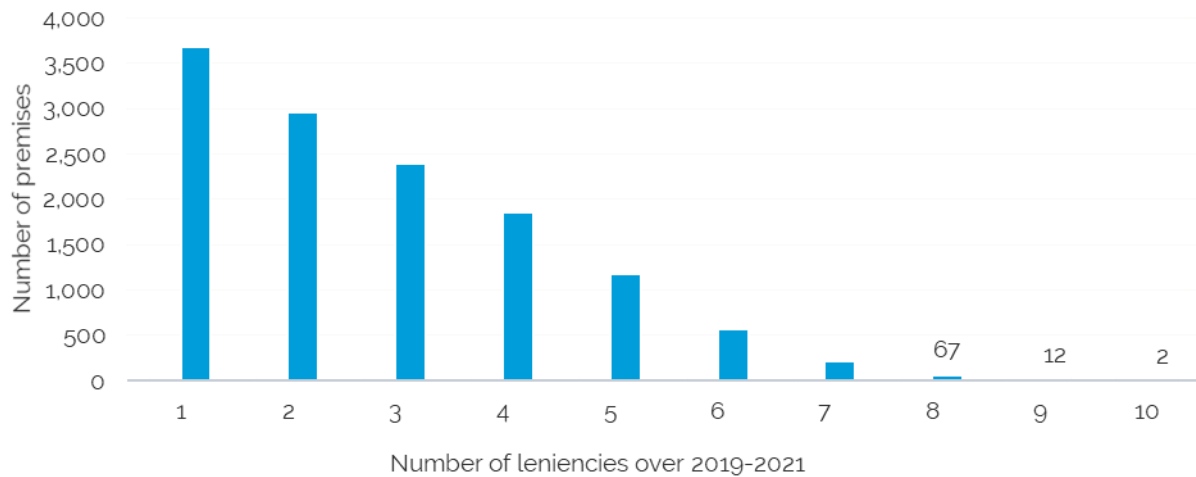
We reviewed FRNSW data from January 2019-October 2021 to understand the distribution of the premises receiving the 60-day leniency. Over this period, 51% of premises that benefitted from the 60-day leniency did so once or twice over the period, although some of these had significantly more false alarms uncharged due to the 24-hour leniency. The most received was 10 over the period, by 2 different premises.

The distribution is shown in Figure 5.5.

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<sup>c</sup> This is approximate due to follow-on impacts with the application of leniencies.

Figure 5.5 Premises that received the 60-day leniency, and how many they received, Jan 2019-Oct 2021



Source: FRNSW data, IPART analysis

### 5.3.6 We recommend excluding false alarms caused by 'poor building maintenance' from receiving the 90-day leniency

Poor building maintenance contributes to about 3% of all alarms. Poor building maintenance could relate to dust or cobwebs accumulating on the detector or pest infiltration in the alarm.

Building maintenance causes should be more easily preventable than some other causes of false alarms, such as malfunctions. To incentivise buildings owners to undertake adequate maintenance to avoid false alarms, the 'free' alarm responses should exclude those that are caused by poor building maintenance. We estimate this could result in a minor increase to the number of chargeable false alarms.

For clarity, we consider it is reasonable that the 24-hr leniency still apply to poor maintenance-caused false alarms – allowing owners 24 hours to rectify the issue without generating a significant bill.

### 5.3.7 We recommend FRNSW retains the waiver system

The existence of a false alarm charge should incentivise AFA owners to take action to avoid those future charges. Incurring a charge should also incentivise AFA owners to reduce the chance of incurring future charges.

The waivers system provides a second chance by refunding 75% of the charge in most cases if building owners undertake certain steps to avoid false alarms. It is refunded in full for certain reasons, such as the alarm being beyond the customer's control. Box 5.1 sets out the reasons waivers can be granted.



Having the option for FRNSW to waive a false alarm charge acknowledges that not all false alarms can be easily predicted. It also adds a financial incentive for AFA owners to undertake rectification work, particularly where significant work is required to rectify a large number of false alarms. Waivers are not granted where a false alarm is caused by poor maintenance.

### Box 5.1 Reasons a charge can be waived

After a charge has been levied, a waiver can be granted if:

- A leniency should have been applied
- False alarm was caused by an event beyond the control of the customer
- Goodwill – where there is evidence that the AFA false alarm was unforeseeable and is unlikely to recur. Available once per AFA number, per customer, in a 5-year period.
- Evidence that, since the AFA false alarm the alarm installation equipment has been repaired or replaced, or the alarm detector has been replaced or moved, to reduce false alarms.
- Evidence that, since the AFA false alarm, practices at the premises that could cause AFA false alarms have been changed to reduce the likelihood of repeat false alarms of the same type (such as removal of food toasters from rooms, provision of occupier education or training),
- Evidence that other rectification work has been conducted to address the cause of the AFA false alarms.
- Evidence that an incorrect AFA false alarm code was transmitted by FRNSW
- There is a written agreement between FRNSW and the customer for waiver of the charges subject to an AFA false alarm reduction program to be successfully completed within a defined time period.

When a charge is waived, FRNSW mostly refunds 75% of the financial amount of the waiver, in some cases it refunds the full amount.

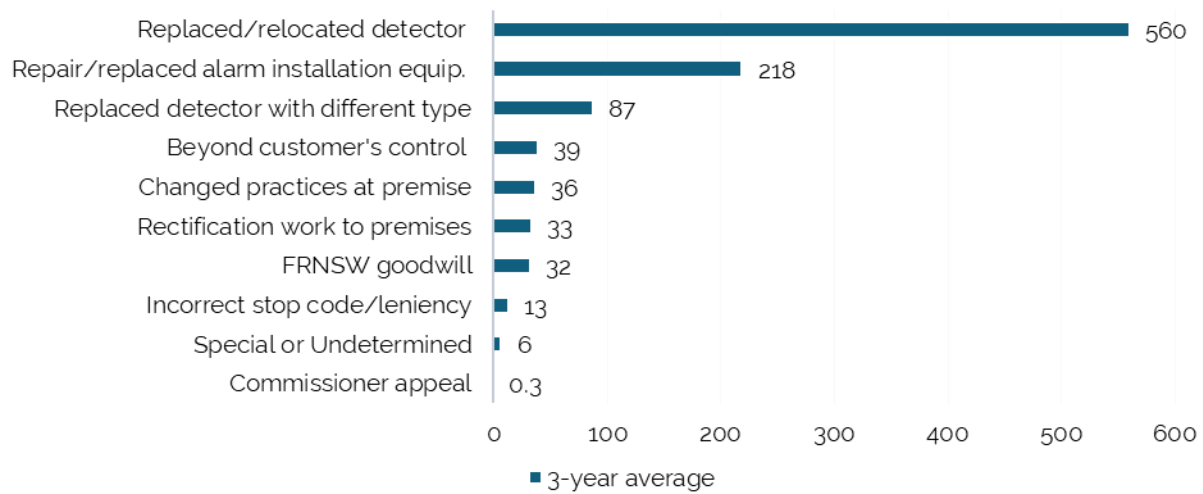
Source: FRNSW, *Automatic Fire Alarm System Agreement, Guideline No. 4*

Most waivers have been approved following the replacement or relocation of installation or detector equipment. In some cases, AFA owners may have taken this action regardless of whether a waiver was available. An alarm owner benefits from avoiding the burden of alarms occurring at their premises as well as avoiding future costs from charges.

In other cases, where there are major system faults with costly repairs, waivers may cover multiple false alarms and significant false alarms bills (for instance, up to \$20,000).<sup>15</sup> The waiver provides a positive financial incentive to complete the work.

Figure 5.6 shows the reasons for which waivers have been approved.

Figure 5.6 Reasons for waiver approval – 3-year annual average



Source: FRNSW, IPART analysis

### 5.3.8 We recommend FRNSW makes a provision for occupants to apply for a waiver on hardship grounds

Contracting arrangements mean that an occupant cannot directly access the waiver system. They must ask the building owner to apply for it via the AFASP. The Tenants Union indicated that occupants may not be aware of the option to apply for a waiver.<sup>16</sup>

The reasons a waiver is granted are usually for actions that would be taken by the building owner.<sup>d</sup> The 'goodwill' criterion could also apply to occupant hardship.

FRNSW should make provision for occupants to apply for a waiver on hardship grounds, as we know that charges are passed on to occupants and they can have a significant impact on parties with a reduced capacity to pay. Waivers for occupant hardship should be limited to cases where the occupant was at fault; including all causes could have the perverse incentive of building owners passing on charges (including the higher ones) if they believe the occupant is likely to be granted a hardship waiver.

<sup>d</sup> We note the criterion "Evidence that, since the AFA false alarm, practices at the premises that could cause AFA false alarms have been changed..." refers mainly to the building owner informing the occupant of behavioural issues that set off false alarms, like not cooking in undesignated areas (for some types of accommodation), if there is excessive smoke generated in an apartment, opening a window rather than the door to the hallway, not smoking near smoke detectors. Therefore, it does not apply directly to the occupant.

## 6 The efficient costs for false alarm attendance

To inform our draft recommendations, we engaged the CIE to estimate the efficient costs of attending false alarm incidents. The CIE presented 3 approaches:

1. FRNSW's full costs of FRNSW distributed across the time spent attending false alarms, found to be \$4,947 per incident.
2. FRNSW's incremental costs of attending each false alarm, plus a portion of overheads, found to be \$429 per incident).
3. FRNSW's incremental costs of attending each false alarm with a portion of stand-by costs (a hybrid of 1 and 2) - found to be \$652.<sup>17</sup>

Our view is that the third approach is the most appropriate measure of the cost to FRNSW of attending a false alarm from an AFA.

The incremental cost (approach 2) indicates how the cost to FRNSW changes as the number of false alarms changes (either higher or lower). Approach 3 adds a portion of FRNSW's stand-by cost based on the estimated change in stand-by capacity if there were no false alarms. The CIE did this by calculating the incremental cost assuming that all false alarms from AFAs are attended by retained fire fighters.<sup>18</sup>

Comparatively, the first approach includes all costs to FRNSW, including capacity to attend all emergencies and we consider this is unlikely to change significantly if there were no false alarms.

Under approach 3, the CIE found the average cost to attend a false alarm is \$652 per incident. The main contributing factors are the incremental cost of fire-fighters and a portion of stand-by capacity that enables the response. To the CIE's finding, we have added a 10% margin to cover the capital expenses.<sup>e</sup> Extrapolating the per incident costs, attending false alarms costs FRNSW \$34.9 million (\$2021-22) per year.<sup>f</sup>

Table 6.1 sets out the cost components and below that we explain the average operational response and the cost components.

<sup>e</sup> Our Draft Report - *Review of Fire and Rescue NSW's fees and charges* - explains why we recommend a 10% margin.

<sup>f</sup> Assuming the 10-year median number of false alarms of 48,204. Direct calculation may vary due to rounding.

Table 6.1 Cost-build-up of attending false alarms

Item	Cost (\$2021-22)
Incremental cost per incident	
Staff (fire-fighters)	286
Truck variable	20
Truck fixed	5
Administration and billing	31
Communications team	32
Portion of overheads	54
Portion of stand-by costs	223
<b>Sub-total</b>	<b>652</b>
10% margin	65
<b>Total</b>	<b>717</b>

Source: The CIE, *Efficient operating costs of providing Fire and Rescue NSW's services*, Draft Report, December 2021, p 29; IPART analysis.

## 6.1 Calculation of the costs

We invited FRNSW to provide information on its costs and false alarm attendance. We commissioned the CIE to review this information and provide advice on efficient operating costs.

The CIE calculated the full cost of attending false alarms using a top-down approach using FRNSW costs and apportionment provided by FRNSW. It calculated the incremental costs using a bottom-up approach. We explain the cost inputs to the incremental approach below.

### 6.1.1 Average operational response and time taken

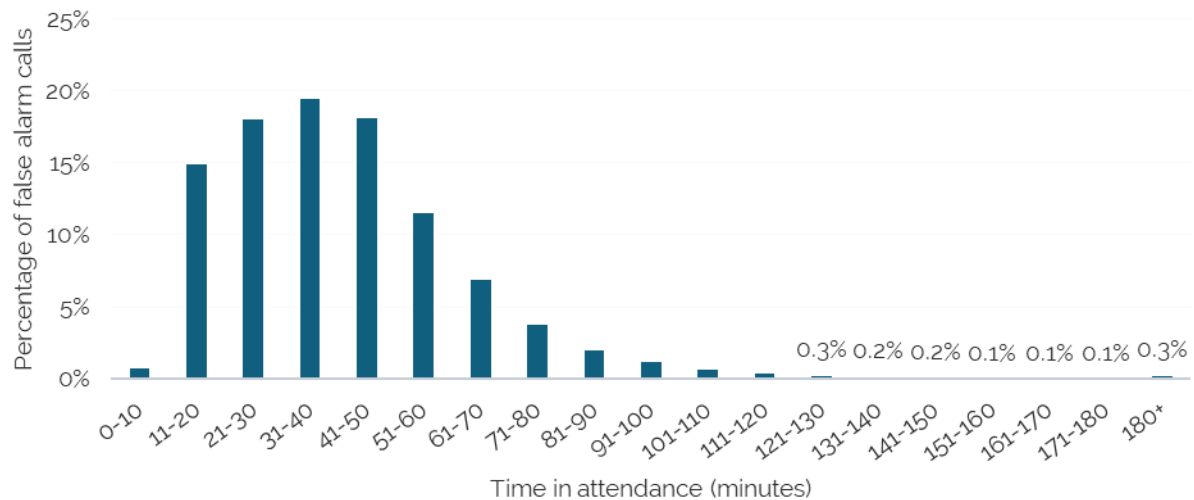
FRNSW's operational response to any alarm of fire whether it is later found to be false or not is 2 pumpers ('fire trucks') and 8 fire fighters. In exceptional circumstances, this might reduce to 1 pumper and 4 fire-fighters.<sup>9</sup> We have not assessed efficiency of the operational response – this is set out by FRNSW to meet the NSW Government's objectives in terms of availability and responsiveness and is beyond the scope of our review.

The average false alarm attendance takes 25 minutes. This has remained stable since at least 2012 and is comparable to average attendance times in Victoria of 25.7 minutes.<sup>9, 20</sup> Broken down regionally, average attendance times increase from 25 minutes in major cities, to 28 and 31 minutes respectively in inner and outer regional areas of NSW.<sup>21</sup>

The attendance times are relatively homogenous – 34% of false alarm attendances are completed within 30 minutes, and 83% within 60 minutes. The distribution is shown in Figure 6.1.

<sup>9</sup> This refers to the time taken up for the incident – from when it is assigned to fire-fighters until they return to the station or begin another incident

Figure 6.1 Time taken to attend false alarms



a. The average time refers to the average time of all fire pumpers in attendance (usually 2).

Source: The CIE, *Efficient operating costs of providing Fire and Rescue NSW's services*, Draft Report, December 2021, p 30.

### 6.1.2 Staff costs per incident

Either full-time fire-fighters or retained staff may attend a false alarm, and depending on the team, the staffing cost will vary. The cost of full-time staff is salary plus on-costs, while retained staff incur a 'call out' charge with a minimum of 2 hours payment. As most false alarm attendances are less than this, retained staff results in a higher incremental staffing cost than full-time staff.

The stand-by time for the 2 different staff types is also very different. While the average stand-by time for full-time staff is approximately 65%, retained staff have zero stand-by time, as they are only called and paid as needed (plus their annual retainer).<sup>22</sup> Therefore, the use of retained staff may be more efficient for FRNSW's overall activities.

The CIE found that the average staffing cost per false alarm attendance is \$286 which reflects both full-time and retained fire-fighters.<sup>23</sup>

### 6.1.3 Pumper costs per incident

FRNSW's standard operational response is for 2 pumpers to attend a false alarm. This would normally be a standard pumper, however they can use other vehicles such as specialised hazmat pumpers. FRNSW reduces the response in regional areas or when there are multiple alarms from one premises in a day or other operational constraints. On average, 1.97 pumpers attend a false automatic fire alarms.<sup>24</sup>

Pumper costs include:

- the variable costs of fuel and tyres for attending an incident.
- fixed depreciation costs based on the time used, assuming a life of 10 years. This means including a portion of the purchase cost of the pumper.

#### 6.1.4 Communications costs per incident

After assigning a call to response crews, the communications team continue to track the crew until the response is completed. The CIE has estimated a cost for communications of \$32 per incident.<sup>25</sup>

#### 6.1.5 Administration and billing per incident

Administration and billing are highly automated for false alarm charges. FRNSW sends daily information to AFASPs regarding the alarms that occurred the previous day and bills the AFASPs monthly. The AFASPs pay FRNSW and collect the charges from their customers and manage any outstanding charges. FRNSW also undertakes some internal analysis work.

CIE estimates 15 minutes of administration time per false alarm. However, it notes that some activities may be double counted in the alarm monitoring costs (separate Information Paper). We will clarify this before the final report.<sup>26</sup>

#### 6.1.6 Overheads and depreciation

We have allocated a share of FRNSW's fixed costs to false alarm attendance, as set out in Table 6.2. Based on the CIE's analysis, the average efficient overheads and depreciation is \$54 per incident.

Table 6.2 False alarm attendance overheads and depreciation

Item	Detail	Estimated cost
Corporate overheads	Labour and operating costs of FRNSW's Corporate Services Division and Governance and Legal Regulatory Services	6.9% of the average false alarm attendance cost
Depreciation	Asset depreciation for the building, computers and other equipment	4.5% of the average false alarm attendance cost
Maintenance costs	Maintenance costs building, computers, communications and other general maintenance costs	3.0% of the average false alarm attendance cost

Source: The CIE, *Efficient operating costs of providing Fire and Rescue NSW's services, Draft Report, December 2021*, p 32.



## 6.2 A portion of stand-by costs

A significant portion of the cost to FRNSW is to have the stand-by capacity to quickly respond to an emergency. The CIE estimated that stand-by capacity represents 81.3% of all FRNSW's costs if considering only 'active' time at incident from permanently staffed stations. This falls to 64.7% after the CIE allocated 4 hours per day to undertake necessary activities that are not otherwise recorded, e.g. maintenance and handover activities.<sup>27</sup>

We consider that a portion of stand-by costs should be attributed to the cost of false alarm attendance for our assessment. This is because attending false alarms is a significant proportion of FRNSW's workload and in the absence of false alarms, it may be possible to reduce stand-by capacity. However, we consider that the full amount that is included in the fully distributed costs is likely to overstate this impact.

### How would operational capacity be affected by a reduction in false alarms?

If there were no false alarms we would expect that:

- In high density areas where there are many false alarms, there could be an overall reduction in staff and pumpers needed as they would be more available to attend other incidents.
- In lower-density areas and where fire-fighters are on a retainer, it is unlikely that a reduction in false alarms would lead to any significant change in stand-by costs,

About 36% of all FRNSW call-outs are to false alarms and in some areas, false alarms are a significant portion of call-outs (noting that call-outs are a subset of all activities and the percentage does not reflect time taken).<sup>28</sup> However, the CIE found that across all permanently staffed stations, 1.6% of active time is spent attending false alarms from AFAs.<sup>29</sup>

The CIE also compared the total time a pumper is actively responding to false alarms from AFAs with the total stand-by time for each station. It found an inverse relationship – as the proportion of false alarm call-outs increased, the amount of stand-by time decreased, indicating that stand-by time is being drawn down for false alarms rather than maintained at a set level.<sup>30</sup>

### Estimating the change in stand-by capacity

We asked the CIE to further investigate how FRNSW attendance at false alarms impacts on FRNSW's resourcing, especially the impact on stand-by capacity arrangements. We asked it to estimate the cost of additional stand-by capacity that might be related to the volume of false alarms.

The CIE estimated the incremental cost per incident if each false alarm were attended by retained staff, which would have the effect of leaving full-time staff on stand-by. It found the average cost per incident would be \$652.<sup>31</sup>

Without further information, we consider the CIE's approach is a reasonable proxy. Compared to the incremental cost, this allocates \$223 of stand-by time per incident which is 4.5% of the fully-distributed cost per incident (\$4,947, \$2020-21).

We would like to better understand how attendance at false alarms impact on FRNSW's resourcing, especially the impact on stand-by and capacity arrangements. Before making our final recommendations, we intend to gather further information from FRNSW and hear stakeholders' views about the potential impact that false alarms have on the overall capacity and staffing.

### 6.3 Other costs associated with automatic fire alarms

FRNSW incurs additional costs related to managing the automatic fire alarms. This includes:

- the IT system that supports the automatic alarm system
- administrative tasks
- managing customer calls
- assessing waiver applications, and the cost of waivers
- pro-active work to help owners reduce the number of false alarms
- compliance work – mainly relating to premises that isolate alarms for significant periods.

Currently, these costs are covered by monthly monitoring charges levied for each alarm and collected through the AFASPs.<sup>h</sup> These are set out in the agreement between FRNSW and the AFASPs. We recommend the FRNSW continues to recover these costs separately through the AFA service charges. We set out these draft recommendations in a separate draft Information Paper.

### 6.4 Broader economic costs of false alarms

We have not included broader economic costs in our assessment. We note that a recent study found the total economic cost of false automatic fire system activations in 2018-19 was \$246 million per annum, or \$4,952-\$7,403 per incident (best-case and base-case scenario respectively).<sup>i</sup>

This included estimates of lost productivity and opportunity costs to businesses, residents, bystanders and the fire brigades as well as the incremental cost of FRNSW attendance and the cost to the public from collisions with attending vehicles.<sup>32</sup>

The burden on businesses and residents of reacting to false alarms should additionally incentivise them to take practical steps to reduce false alarms.

<sup>h</sup> AFASPs are charged an annual fee, plus additional fees based on the number of alarms that they are connected to. They pay the total costs to FRNSW and recover this through their fees levied on their customers.

<sup>i</sup> This is in a best-case scenario and \$349 million per annum in a base case scenario.

## 7 Recommended level of charges

Unlike other charges which are primarily based on cost recovery, the charge for a particular AFA false alarm call-out is intended foremost to incentivise the right behaviour in alarm owners.

However, we have also considered the total cost to FRNSW of attending all false alarms, whether or not they are charged, on the basis that they should be able to recover these costs from relevant impactors.

### Draft recommendation



23. The charges for attending false alarms in 2022-23 to be set in the FB Regulation:

- \$1,975 for the full charge (\$2022-23)
- \$395 for the discounted charge (\$2022-23).

### 7.1 Setting incentives

To set the right incentives for safety and positive behavioural responses to false alarm charges, we consider an appropriate charge should:

- exceed the cost of making necessary repairs or otherwise reducing future false alarms
- not be so high as to cause undesirable outcomes of unsafe and illegal work-arounds
- take into account capacity to pay.

#### 7.1.1 The current charge

The false AFA charge is set at \$1,600 in the agreement with AFASPs. However, the charge to the building owner is likely to be \$1,760. This is because FRNSW levies it to the AFASPs who pass charges on to their customers typically with a 10% administration fee.

The charge for false alarm attendance in the agreement with AFASPs aligns with the charge for false alarm attendance under the FB Regulation (which applies to other false alarms than are not generated through an AFA). The false alarm charge in the FB Regulation has remained the same since it was set in December 2016. With inflation added, it would have been \$1,771 in 2020-21.

We assessed the trend in false alarms per alarm system in NSW. The most recent (December 2016) increase in charge to \$1,600 corresponds to a decline in the number of false alarms (see Figure 4.1). This suggests that the charge is set at a level that can incentivise change.

However, FRNSW has advised that it saw an increase in hours that alarms are isolated (i.e. disconnected from the system so unable to trigger an alarm call to FRNSW) following the increase in charge. This suggests that further increases may increase the level of isolations that are made to avoid false alarms (there are legitimate reasons for isolations, including planned building work and external conditions such as bushfire smoke). FRNSW investigates premises with high levels of isolation.<sup>33</sup> We consider that a regulatory response from FRNSW to ensure fire safety is appropriate to address the risk of AFA isolations rather than reducing the level of the false alarm charge.

### 7.1.2 The cost of repairs needed to avoid future alarms

The effectiveness of an incentive is related to the cost of taking required action. The recommended charge exceeds the cost of rectification work in many but not all cases.

#### **Rectification work varies from simple to complex and costly**

The cost to rectify the cause of false alarms ranges from:

- \$100-\$200 to replace a faulty detector – the most common rectification action, to
- a few thousand dollars for actions such as detector relocation, installation of bulk heads (e.g. to prevent steam moving directly to the detector) and changes to ventilation, to
- hundreds of thousands of dollars for a major systems upgrade. While less common, this happens a few times a year and prevents many false alarms per premises.<sup>34</sup>

When these actions are taken, the building owner can apply for FRNSW to waive the charge (or accumulated charges), receiving a 75% refund.

Our draft recommended charge provides a strong incentive to replace a detector, and when there have been multiple false alarms, to undertake some minor structural work. This charge is unlikely to outweigh the cost of major works until there are many accumulated false alarms.

#### **There is no clear cost to reference when the causes are more behavioural**

Some false alarms causes do not need a financial investment to avoid, such as when they are caused by a person's behaviour e.g. cooking fumes. In some cases, these could be accidental, in others they might involve some negligence such as not following procedures on a worksite or cooking in an area not designated for cooking. In the latter cases, a building owner may take steps taken to educate occupants or workers such as installing signage or updating work procedures.

### 7.1.3 Capacity to pay varies

There is a broad range of stakeholders – the alarm owners range from bodies corporate, shopping centre owners, retirement villages, to large establishments like hospitals. However, the alarm owners may have the ability to pass on charges to tenants (residential or retail) or occupiers which introduces stakeholders with lower capacity to pay.

The draft recommended charging structure provides a lower charge for those that may have the lowest capacity to pay – residential tenants. This is a simple approach to protect some of the more vulnerable customers, as well as providing less incentive for unsafe behavioural responses.

### 7.1.4 Some premises incur significant bills

As shown in Chapter 5, many premises have a low occurrence of false alarms and a small number incur a significant volume of false alarms and accumulated charges – 10% of all false alarms come from 96 premises.

Almost 700 premises have accumulated charges over \$10,000 a year, 5 of which are over \$100,000 per year. The premises with the most false alarms are hospitals, correctional facilities, universities, retail complexes and defence force facilities. Table 7.1 outlines the types of complexes that incur the highest bills.

Table 7.1 Summary of bill size and type of premises

Annual bill (avg 2018-2021)	Number of premises	Premises type
\$10,000 - \$50,000	647	Main contributors are: Apartments (119), Offices (74), Hospitals (69), Retail (59), Education (58), Nursing homes (55), Hotels/Motels (53), Warehouses/factories (42).
\$50,001 - \$100,000	36	Hospitals (8), correctional facilities (8), retail (8), education (5), apartments (5), defence force complexes (3)
>\$100,000	5	Correctional facilities (2), Defence force complexes (1), Education (1), Retail (1).
<b>Total</b>	<b>689</b>	

Intuitively, this level of accumulated charges on an annual basis should provide a substantial incentive to undertake the necessary work to reduce false alarms.

We considered whether a structure with escalating charges would better incentivise the repeat offenders. Higher level of charges would increase the incentive and make it more attractive to undertake relevant rectification work. We note that the cumulative impact results in significant bills to some premises, and our recommended changes to the leniencies would add to this.

However, there may be other barriers that reduce the effectiveness of a financial incentive including:

- ownership and funding sources
- barriers to undertaking major repairs in occupied or highly used buildings
- the ability for the owner to pass on the charges
- challenges in changing occupant behaviour, for instance where passing on a charge is not possible or does not have the desired impact.

For these stakeholders, it may be more effective for FRNSW to undertake proactive engagement work.

### 7.1.5 Illegal tampering with alarms to avoid false alarms

Tampering with alarms is an offence under the *Fire and Rescue Act*<sup>35</sup> and increases the risk from fire to the occupant, building and potentially neighbours.

At the occupant level, FRNSW and the Building Owners Association of NSW raised concerns about occupants covering detectors.<sup>36</sup> The extent to which this happens is unclear however, and we would expect this to increase if charges increase.

In our view, the current charge is excessive when charged on to occupants. The recommended charging structure may work to reduce this by reducing the charges that are passed on and signalling which charges should be paid by the owner.

It is possible that the full charge will also be passed on to individuals in some cases, which could further encourage alarm tampering. We recommend that FRNSW work with NSW Fair Trading to develop information for occupants on their rights, responsibilities and courses of action if a charge has unfairly been passed on.

It is also important that the relevant actors are aware of the potential to be charged so that they prevent false alarms.

### 7.1.6 Keeping occupants informed of the alarm system

We have also heard that false alarms can be caused by visitors to premises, such as workers whose work can result in setting off the alarm (for instance if they create a lot of dust near the detector).

Building owners should continue to ensure occupants, workers and other visitors are aware of the alarm system, how it may be triggered, and the potential for a charge. This includes in private areas and in common areas where the detectors may be connected to the automatic system.

## 7.2 Options for charges

In recommending draft charges we aim to set the right incentives, but have also taken into account the cost to FRNSW.

Setting the charge close to the incremental cost per incident (even with some stand-by costs included) to FRNSW would be too low to be an effective incentive to most stakeholders, and setting it at the fully distributed cost would be excessive.

We consider our draft recommendation balances these by setting a reasonable incentive through both the full and discounted charges and recovers the cost to FRNSW of attending all false alarms from AFAs.

We considered 5 options. Three of these (options 3-5) recover the approximate total incremental cost (including a portion of stand-by costs) to FRNSW from the expected number of alarms that are charged. The five options were:

1. Adjust the current charge for inflation since 2016, at \$1,845 (in \$2022-23) with the discounted charge at 25% of this (\$460).

2. Set the charges to recover the incremental cost (no stand-by cost) of attending all false alarms, with the discounted charge at 25% of the full charge.
3. Set the charges to recover incremental cost + stand-by cost of attending all false alarms, with the discounted charge at 20% of the full charge & 60-day leniency in place.
4. Same as option 3 but with the 90-day leniency in place.
5. Same as option 4 but the discounted charge is 25% of the full charge.

The resulting charges and revenue impacts are set out in Table 7.2. below. They are presented in \$2022-23 and options 2-5 include the 10% margin in the cost build-up (option 1 does not include the margin as we based the charge only on incentive impact rather than trying to recover costs). The charges and revenue under each option are set out in Table 7.2.

Table 7.2 Charge under different options (\$2022-23)

	<b>Option 1</b> Current charge + CPI 90-day leniency Discounted charge is 25%	<b>Option 2</b> No stand-by cost 90-day leniency Discounted charge is 25%	<b>Option 3</b> With stand-by cost 60-day leniency Discounted charge is 20%	<b>Option 4</b> With stand-by cost 90-day leniency Discounted charge is 20%	<b>Option 5</b> With stand-by cost 90-day leniency Discounted charge is 25%
Full charge	\$1,845	\$1,275	\$2,220	\$1,975	\$1,940
Discounted charge	\$460	\$320	\$445	\$395	\$485
Expected revenue (m)	\$33.8m	\$23.4m	\$35.6 m	\$35.6 m	\$35.6 m

Note: To assess revenue, we have assumed 48,204 false alarms per year which is the median number of alarms over the last 10 years. We have also assumed our recommended charges practices would be adopted.

Our draft recommendation is option 4. We consider this sets reasonable incentives through both the full and discounted charges. It also recovers the estimated incremental cost to FRNSW of attending each false alarm.

## 8 Impact of recommended charges

The discounted price for residential occupants should reduce the incidence of adverse outcomes.

### 8.1 The full charge

Our draft recommendation results in a 23% increase (\$375) in the full charge for FRNSW attendance at a false AFA,

We consider this reasonable considering:

- many building owners have a high capacity to pay
- the charge has not increased since 2016. The draft recommendation is 7.0% higher than if inflation had been added (assuming \$2022-23)
- the discounted charge may lessen the overall impact on the building owner if they are absorbed by the building owner.

### 8.2 The discounted charge

The discounted charge presents a significant change from the status quo.

- Where a building owner absorbs the charge, this is more reflective of the costs needed to educate the occupant about avoiding future false alarms.
- Where it is passed on to residential occupants, it is a fairer charge that better reflects ability to pay. We consider it is high enough to incentivise occupants to avoid false alarms. It may minimise the detrimental impacts of avoiding normal activities in the home and illegal tampering with detectors.

The discounted charge is also comparable to common penalties in NSW. While it is difficult to compare the risk and effectiveness of the incentive, it is at a similar level to penalties for most traffic offences, which generally range from \$194 to \$464. These are comparable incidents applying to a broad range of individuals and requiring a simple behaviour change to avoid a penalty. There are higher charges for higher risk activities and vehicles that are trucks or buses.

It is also comparable to a charge that the NSW Police may levy for second and subsequent false security alarms that it attends in a 28-day period, set at \$200.<sup>37</sup>



Table 8.1 Summary of penalties for traffic offences and other minor offences

Type	Description	Penalty
Traffic offences	Pedestrian traffic offences/bicycle offences	\$78/\$116
	General driving offences (not speeding)	\$194 to \$464 mostly. \$1,123 and \$1,472 for multiple unrestrained/unhelmeted passengers
	Speeding (<10km/h over to >45km/hr over)	\$121 - \$2,520 for class A vehicles
	Bus and truck/ class B and C vehicle offences.	\$194 - \$2,400
	Licence/registration offences	\$116 - \$1,819
	Littering from a vehicle	\$250 for an individual
Criminal infringement notices	Offensive language or behaviour	\$500
	Unlawful entry of a vehicle or boat	\$250
	Obstruct traffic	\$200
	Stealing under \$300	\$300
	Unlawful possession of property	\$350
	Continuation of intoxicated and disorderly behaviour after move-on direction	\$1,100
Public transport	Small quantity of prohibited drug	\$400
	Travelling without a ticket, feet on seat offensive behaviour, smoking etc	\$200-\$400, maximum penalty \$550 - \$5,500

Sources: Transport for NSW 'Speeding' and 'Travel offences' accessed 14 December 2021; documents: [General demerits](#), [Speeding offences](#); [Criminal Procedure Regulation 2017](#), Schedule 4; NSW Environmental protection Authority 'Report Littering', accessed 14 December 2021.

### 8.3 The revenue impact

We estimate that the revenue impact to FRNSW from our draft recommendations would be minor, resulting in \$0.2 million less revenue in 2022-23 compared with maintaining the current charge and charging practices.

Table 8.2 sets out the expected revenue in 2022-23 if the current charge was continued, and under our recommendation.

Table 8.2 Expected revenue impact in 2022-23 (\$2022-23, millions)

Item	Result
Forecast revenue with current charges	\$ 35.5 million
Forecast revenue under recommendations	\$ 35.6 million
Difference (\$)	\$ 0.2 million
Difference (%)	0.5 %

Note: To calculate this, we assumed 48,204 alarms occur in 2022-23, which is the 10-year median number of alarms. Numbers may not add due to rounding.

# Appendices

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## A Assessment of alternative charging options

Below, we outline our assessment of the remaining 4 charging structure options, with assessment against the principles set out in Table A.1.

### A.1 A single charge (status quo)

This option would continue the status quo. This is not our preferred charging structure because of the different impact it has on different stakeholders as described in Section 5.2.

### A.2 Scaled charges based on the type of premises

This would set different charges for different building classes or premises type if there are clearly different costs attributable to attending the different premises. FRNSW has data on 35 'premises type', and 17 'building classes'.

The CIE found the incremental attendance costs range from \$366 to \$559 by building class.<sup>38</sup> The 5 specific premises types with highest cost account for 2.8% of false alarms while the premises types with the 5 lowest costs account for 42% of all alarms.<sup>39</sup>

This is not our preferred approach because it is focussed primarily on reflecting cost drivers rather than incentivising the right behaviour. We also note FRNSW's data on building class and premise types may be imprecise and the work to correct it may outweigh the benefits.

### A.3 Scaled charges based on whether the building is primarily residential or non-residential

This approach would set 2 charges depending on the primary use of the premises. This breakdown could better link the incentives to capacity to pay. It would likely result in a lower charge for residential properties, and higher for non-residential properties working on the assumption that businesses typically have a higher capacity to pay than individuals. This may protect individuals from a higher charge when charges are passed on. We also note that charges are ultimately recovered from occupants through strata levies or tenancy costs (e.g. in aged care).

This is not our preferred approach because it may not set the right incentives for many false alarms caused at residential premises which may be the responsibility of an owner's corporation. For instance, sharing the cost via a 'general fund' reduces the impact on the individual contributors (i.e. unit owners) and may reduce the incentive to ensure the building management undertake proper preventative measures.

## A.4 A variable charge based on attendance time.

This option would have each call-out charged per 10- or 15-minute block the fire brigade is in attendance. This is not our preferred approach because:

- It is focused on cost-reflectivity but does not improve incentives to reduce false alarms from AFAs or equity.
- There is little variation in response times: 34% take 0-30 minutes (total resource time added) and another 49% take 31- 60 minutes (see Figure 6.1). The administrative complexity may outweigh any benefit from additional cost reflectivity.
- The attendance time and resources used are driven by the operational response, proximity to a station and traffic. These are factors an alarm owner cannot control.

Table A.1 Assessment of alternative charging options against the pricing principles

Principle	One set fee (status quo)	Different charge for residential or non-residential use	Set charges based on premises type	Cost per vehicle by time
Cost reflective	~	~	~	✓
Equitable	✗	~	~	✗
Right incentives	✗	~	✗	~
Transparent	✓	~	~	✗
Simple	✓	~	~	✗
Flexible	✗	✗	✗	✓
Consistent	✓	~	~	✓

<sup>1</sup> Fire and Rescue Act 1989, s 11(1).

<sup>2</sup> Fire and Rescue Act 1989, s 42(1)(e).

<sup>3</sup> FRNSW, 'Automatic Fire Alarms' Viewed 17 December 2021.

<sup>4</sup> FRNSW, 'Automatic Fire Alarms' viewed 9 December 2021. See, for example, National Construction Code 2019 Building Code of Australia - Volume One, Specification E2.2a clause 8.

<sup>5</sup> FRNSW, 'Charges for false alarms', viewed 12 November 2021.

<sup>6</sup> FRNSW, *Guideline No. 4 - Application to Waive AFA False Alarm Charges*, October 2019, pp 3-4.

<sup>7</sup> *Fire Brigades Regulation, 2014* (FB Regulation), Cl 47.

<sup>8</sup> FRNSW, 'Billing of charges', accessed 1 December 2021.

<sup>9</sup> FRNSW, 'Billing of charges', accessed 1 December 2021.

<sup>10</sup> IPART meeting with FRNSW, 22 September 2021.

<sup>11</sup> Property Owner's Association, Submission to IPART Issues Paper, 5 October 2021, p 1; Email to IPART, Tenants Union of NSW, 12 October 2021.

<sup>12</sup> IPART meeting with FRNSW, 22 September 2021; Email to IPART, Tenants Union of NSW, 12 October 2021.

<sup>13</sup> Queensland Fire and Emergency Service, 'Pragmatic cooking and shower test', viewed 9 December 2021.

<sup>14</sup> FRNSW, *Automatic Fire Alarm System Agreement Guideline No. 4*, p 3.

<sup>15</sup> FRNSW, meeting with IPART, 12 November 2021.

<sup>16</sup> Email to IPART, Tenants Union of NSW, 12 October 2021.

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- <sup>17</sup> The CIE, *Efficient operating costs of providing Fire and Rescue NSW's services*, Draft Report, December 2021, pp 29, 41, 42.
- <sup>18</sup> The CIE, *Efficient operating costs of providing Fire and Rescue NSW's services*, Draft Report, December 2021, p 42.
- <sup>19</sup> The CIE, *Efficient operating costs of providing Fire and Rescue NSW's services*, Draft Report, December 2021, p 32.
- <sup>20</sup> The CIE, *Efficient operating costs of providing Fire and Rescue NSW's services*, Draft Report, December 2021, Table 4.15, pp 38, 46.
- <sup>21</sup> The CIE, *Efficient operating costs of providing Fire and Rescue NSW's services*, Draft Report, December 2021, pp 38, 44-45.
- <sup>22</sup> The CIE, *Efficient operating costs of providing Fire and Rescue NSW's services*, Draft Report, December 2021, p 42.
- <sup>23</sup> The CIE, *Efficient operating costs of providing Fire and Rescue NSW's services*, Draft Report, December 2021, pp 29, 31-32.
- <sup>24</sup> The CIE, *Efficient operating costs of providing Fire and Rescue NSW's services*, Draft Report, December 2021, pp 30, 32.
- <sup>25</sup> The CIE, *Efficient operating costs of providing Fire and Rescue NSW's services*, Draft Report, December 2021, pp 32-33.
- <sup>26</sup> The CIE, *Efficient operating costs of providing Fire and Rescue NSW's services*, Draft Report, December 2021, p 39.
- <sup>27</sup> The CIE, *Efficient operating costs of providing Fire and Rescue NSW's services*, Draft Report, December 2021, p 38.
- <sup>28</sup> FRNSW [Annual Reports](#), 2016-17 to 2020-21, IPART analysis
- <sup>29</sup> The CIE, *Efficient operating costs of providing Fire and Rescue NSW's services*, Draft Report, December 2021, p 40.
- <sup>30</sup> The CIE, *Efficient operating costs of providing Fire and Rescue NSW's services*, Draft Report, December 2021, p 40.
- <sup>31</sup> The CIE, *Efficient operating costs of providing Fire and Rescue NSW's services*, Draft Report, December 2021, p 42.
- <sup>32</sup> W. Kathy Tannous, [The economic cost of unwanted automatic fire alarms](#), September 2021, Fire Safety Journal 124 (2021) 103394.
- <sup>33</sup> FRNSW, meeting with IPART, 12 November 2021.
- <sup>34</sup> FRNSW, meeting with IPART, 12 November 2021.
- <sup>35</sup> *Fire and Rescue Act 1989*, s 34.
- <sup>36</sup> FRNSW, meeting with IPART; Property Owner's Association, [Submission to IPART Issues Paper](#), 5 October 2021, p 1.
- <sup>37</sup> *Police Act 1990*, section 209.
- <sup>38</sup> The CIE, *Efficient operating costs of providing Fire and Rescue NSW's services*, Draft Report, December 2021, Table 4.11, pp 34-35.
- <sup>39</sup> The CIE, *Efficient operating costs of providing Fire and Rescue NSW's services*, Draft Report, December 2021, Tables 4.12 and 4.13, p 35.