IPART Independent Pricing and Regulatory Tribunal | NSW

Draft charges for Fire and Rescue NSW's hazardous material incident attendance

Information Paper

December 2021

Contents

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 attending hazardous material (hazmat) incidents, and is structured as follows:

- Section 1 summarises our draft recommendations on FRNSW's hazmat charges
- Section 2 provides an overview of FRNSW's hazmat incident attendance and current charges
- Section 3 explains our approach in making our draft recommendations
- Sections 4 to 6 provide our assessment of the basis for user charges for hazmat incident attendance, analysis of the efficient costs of FRNSW's hazmat incident attendance, and assessment of various charging options we considered
- Section 7 explains the potential impact of our draft recommendations.

This Information Paper is supported by our Draft Report. Separate Information Papers contain our analysis and draft recommendations on charging for false alarm call outs, automatic fire alarm management and system service, fire safety activities in the built environment and FRNSW's other services

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Timeline for this review

1 Summary of our draft recommendations

Draft recommendations

2. FRNSW charge a call-out fee plus hourly charges for chargeable hazmat incidents as set out in Table 1.1.
   - Incidents less than one hour (inclusive) will incur a call-out fee of $335 for wires down incidents and $480 for other hazmat incidents.
   - Incidents more than one hour will incur a call-out fee plus hourly charges depending on the equipment used

3. FRNSW apply equipment charges set out in Table 1.1 to chargeable hazmat incidents with attendance time greater than 1 hour.

Table 1.1 sets out our draft recommended charges for attending hazmat incidents. Overall, we recommend a call-out fee plus hourly charges for chargeable hazmat incidents.

Under our recommendations, incidents less than 1 hour (inclusive) will incur a call-out fee, and those of more than 1-hour duration will incur a call-out fee plus additional variable charges depending on the equipment used.

The recommended call-out fee is different for wires down and other hazmat incidents, but the same variable charges will apply to both incident types. The call-out fee for other hazmat incidents is around $150 higher than wires down incidents because of higher administration costs associated with administration and billing for other hazmat incidents.

Consistent with FRNSW's current approach, we recommend half of the hourly charge apply for each half hour of use.

Table 1.1 Draft recommended charges for hazmat incident attendance ($2022-23, ex-GST)

		Unit	Charge
Call-out fee applicable to all incidents			
Wires down		Per incident	$335
Other hazmat incidents		Per incident	$480
Variable charges applicable to incidents over 1 hour where chargeable time is total attendance time less 1 hour			
Each standard pumper and hazmat pumper (4 crew)	Total	Per hour	$510
	Labour	Per hour	$470
	Vehicle	Per hour	$40
Each other hazmat vehicles and Mobile Command Centre (2 crew)	Total	Per hour	$285
	Labour	Per hour	$240

		Unit	Charge
	Vehicle	Per hour	$45
Each special operations vehicle (1 crew)	Total	Per hour	$200
	Labour	Per hour	$165
	Vehicle	Per hour	$35
Other equipment			
Each hazmat delta decontamination shelter		Per hour	$285
Each boat (including a trailer and vehicle to tow it)		Per hour	$285
Each helicopter		Per hour	$3,365
Each hose		Per hour	$65
Each fully encapsulated gas suit		Per hour	$65
Each spillage suit		Per hour	$10
Each self-contained breathing apparatus		Per hour	$65
Each standard gas detector		Per hour	$65
Each unit of specialised detection equipment		Per hour	$65

In addition to recommending hazmat charges, we recommend that FRNSW review its hazmat charging policy to remove the time threshold for chargeable incidents and charge all Distribution Network Service Providers (DNSPs). Also, we recommend FRNSW simplify a list of consumables to reduce administrative and billing costs. Finally, we recommend that when the FB Regulation is next reviewed, the remade regulation should provide flexibility for FRNSW to charge at cost for the use of equipment that is not listed in the FB Regulation.

2 FRNSW's hazmat incident attendance and current charges

Under the *Fire and Rescue NSW Act 1989* (FRNSW Act), FRNSW is responsible for protecting the people, property and environment of NSW from the impact of hazmat incidents. A hazmat incident is an actual or impending land-based spillage or other escape of hazardous material that causes or threatens to cause injury or death or damage to property.[1]

FRNSW responds to two types of hazmat incidents:

- incidents involving electricity "wires down", where services are provided to electricity distribution and transmission network service providers
- all other hazmat incidents, where services are provided to individuals, organisations or other government agencies.

FRNSW currently can charge for any hazmat incident response, but has policies about not charging in various circumstances, so in practice only charges for 2-6% of incidents.[2]

FRNSW also has other responsibilities regarding hazardous materials:

- receiving notifications of radiation gauges and the locations of radiation sources[3]
- consultation and making recommendations about emergency plans for workplaces that handle, use or store hazardous chemicals exceeding a certain quantity, major hazard facilities; and licensed explosives sites.[4]

The FRNSW Act provides for FRNSW to recover charges for the services of the brigades in respect of hazmat incidents anywhere in the State.[5] FRNSW cannot charge for firefighting where the fire arose from a hazmat incident.[6]

The FB Regulation sets out the maximum charges for attending hazmat incidents as:

- variable charges (half-hourly) for different items of equipment used or made available for use
- at cost for goods or services hired or purchased, or premises hired, to perform services
- at cost plus 10% handling costs for consumables.[7]

While FRNSW can charge for all hazmat incidents based on the charges in the FB Regulation, it does not currently charge for numerous categories of hazmat incidents, including:

- domestic hazmat incidents
- wires down incidents of less than 2-hour duration
- other hazmat incidents of less than 1-hour duration
- an incident arising from orphan waste.

Waiver or reduction of charges is by exception.

3 How we made our draft recommendations

In making our draft recommendations on hazmat charges, we took the following 4 steps.

1. Assess whether FRNSW's hazmat charging should have user charges and have charges set out in the Regulation based on the principles outlined in Box 3.1
2. Estimate the efficient cost of attending hazmat incidents using a cost build up approach described in Box 3.2
3. Determine the most appropriate charging structure for FRNSW based on 7 pricing principles outlined in Box 3.3
4. 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 Section 4 to 6, we describe how we have implemented these steps to reach our draft recommendations and findings. Section 7 provides our analysis of the impact of our draft recommendations.

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 hazmat incidents should be subject to user 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 regulations based on whether it is a monopoly service.

Box 3.2 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 hazmat incident attendance.

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.

Box 3.3 Principles for recommending charges

In recommending charges for attending hazmat incidents, 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.

Box 3.3 Principles for recommending charges

- 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.

4 User charges for hazmat incident response

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

We have conducted a comprehensive review of FRNSW's non-core services and assessed whether each service should be subject to user charges, and, if so, whether it should 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 in question. Our view is that the impactor or risk creator should pay the costs associated with providing the service.
- Whether the service in question is a monopoly service to decide whether it should have charges set out in the Regulation. If FRNSW is not the monopoly provider of the service in question, customers can choose to engage FRNSW or other services providers in the market. In this case, charges for the service do not need to be set out in the FB Regulation.

We have assessed that FRNSW's hazmat incident attendance should have user charges set out in the FB Regulation. This is because FRNSW is the monopoly provider of the service and there is an identifiable impactor. This is consistent with NSW Parliament's initial intention that the costs of dealing with hazmat incidents are shared with those who have responsibility for the hazardous material.[8]

5 Analysis of efficient costs of attending hazmat incidents

As Section 3 discussed, to make our draft recommendations on charges for attending hazmat incidents, we estimated the efficient costs of attending wires down and other hazmat incidents. We did this using a cost build up approach.

5.1 Overview of our draft findings

We found that the costs of attending hazmat incidents are predominantly driven by the incident attendance time, and the number of trucks, and as a result staff, that attend. However, the key difference is that attendance for other hazmat incidents is more administration intensive and hence incurs higher administration and billing costs.

Table 5.1 summarises staff and vehicle costs. Pumpers are most frequently used. The average time per truck is 55 minutes for wires down incidents and 52 minutes for other hazmat incidents.[9] 73% of wires down incidents and 80% of other hazmat incidents are 60 minutes or less.

Staff and vehicle costs do not vary between wires down and other hazmat incidents. Labour (staff) costs are the biggest cost driver for pumper costs. Most vehicle costs relate to vehicle running costs such as fuel and tyres.

Table 5.1 Staff and vehicle costs ($2021-22)

	Unit	Staff	Vehicle variable	Vehicle fixed
Wires down				
1 crew	Per hour	$195	$30	$1
2 crew	Per hour	$202	$29	$9
4 crew	Per hour	$414	$29	$8
Other hazmat incident				
1 crew	Per hour	$136	$30	$1
2 crew	Per hour	$213	$29	$9
4 crew	Per hour	$411	$29	$8

Source: The CIE and IPART analysis.

Table 5.2 shows administration and billing and overhead costs per each wires down and other hazmat incident. While attending wires down and other hazmat incident has similar overheads, the cost of administration and billing is substantially higher for other hazmat incidents than for wires down incidents.

Table 5.2 Administration and billing and overheads costs ($2021-22)

	Unit	Administration and billing	Overheads
Wires down	Per incident	$17	$63
Other hazmat incident	Per incident	$81	$70

5.2 Our approach to estimating efficient costs

We invited FRNSW to provide information on their costs and hazmat incident attendance. We commissioned the CIE to review this information and provide advice on efficient operating costs. The sections below provide key findings for each of the 4 cost drivers for FRNSW's hazmat incident attendance, which include:

- incident attendance time
- administration
- corporate overheads including depreciation
- equipment charges.

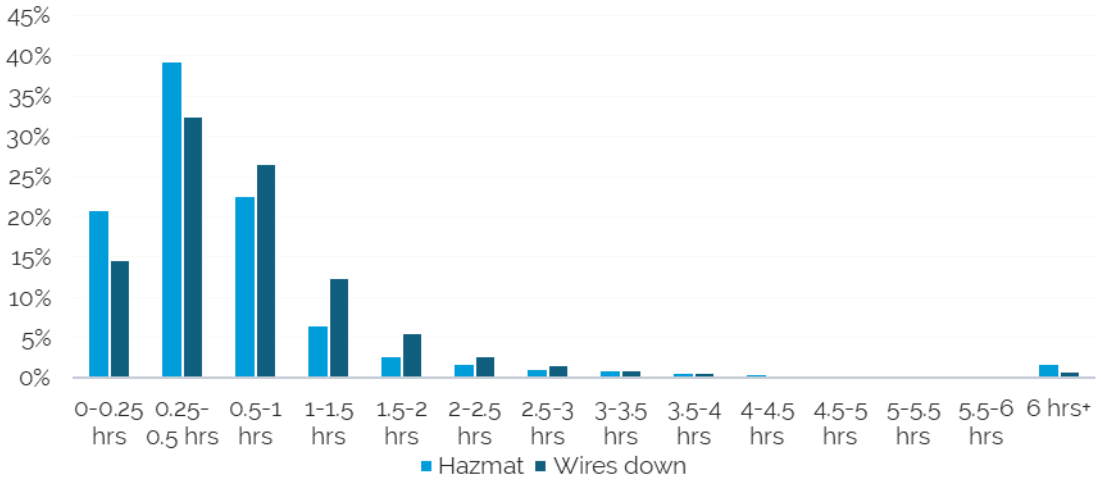
5.2.1 Incident attendance time

The total incident attendance time for each piece of equipment determines the incremental cost for staff and equipment. It is the time the equipment (or staff) left its station until the time the equipment (or staff) returned to its station. Staffing costs are directly related to the actual attendance time, while equipment costs include petrol and tyre usage and depreciation of the equipment used.

The average total incident time for wires down incidents is 66 minutes, and for other hazmat incidents is 62 minutes (with a median of 41 minutes and 30 minutes, respectively).[10]

About 83% of other hazmat incidents and about 74% of wires down incidents were under 1 hour per incident. Although most services were under an hour, there were some incidents with much longer times. Each year, on average around 25 wires down incidents (around 1%) and 174 other hazmat incidents (around 2%) had more than 6 hours of attendance.

Figure 5.1 Hazmat incident attendance time



Source: FRNSW

5.2.2 Labour costs

Either full-time firefighters or retained staff can attend a hazmat incident, 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 hazmat incidents are around 1 hour, retained staff results in a higher incremental staffing cost than full time staff.[11]

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%, retained staff have zero standby time, as they are only called and paid as needed (plus their annual retainer).[12]

The CIE's estimated labour costs are similar between wires down incidents and other hazmat incidents given the similar average total incident time.

Based on the CIE's estimated efficient cost, the average labour cost ranges between $136 and $414 per vehicle depending on the resourcing requirement for each truck in terms of the number of crew.

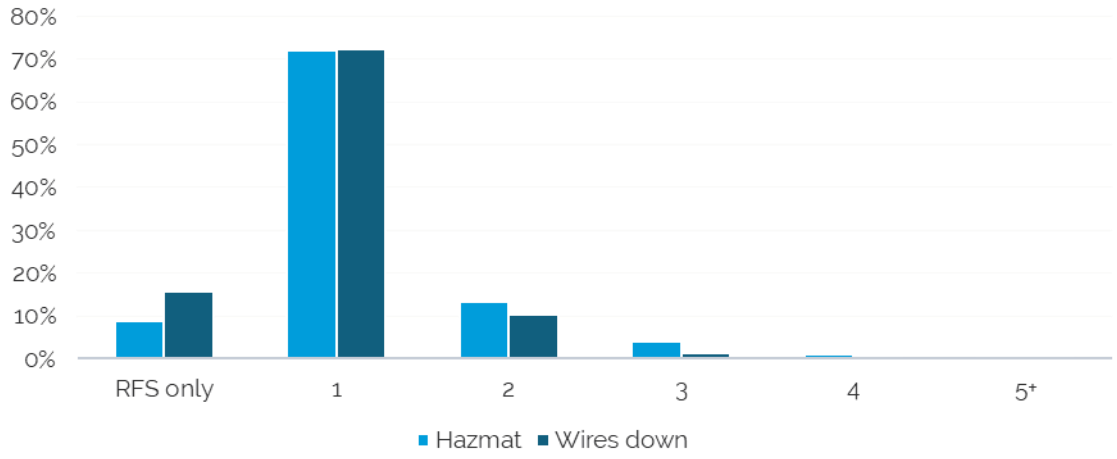
We note that the estimated labour costs include the cost of the Operational Communications team which manages the system that assigns resources to emergency incidents including hazmat incidents.[13] The cost of the Operational Communications team relating to hazmat incidents is estimated to range from $52 to $88 per vehicle.

5.2.3 Pumper costs

FRNSW utilises a variety of pumpers to attend a wires down incident or hazmat incident such as a standard pumper or specialised hazmat pumper, The number and type of pumpers that attend an incident will impact on the cost.

Pumpers are the most frequently used equipment in wires down and other hazmat incidents. On average, FRNSW uses 1.2-1.4 pumpers to attend hazmat incidents.[14] Specifically, around 83% of wires down incidents had 1 or 2 pumpers attending. Also, most other hazmat incidents (about 85%) had 1 or 2 pumpers attending.

Figure 5.2 Number of items of equipment responding per incident



Source: FRNSW

The estimated pumper costs are similar between wires down incidents and other hazmat incidents due to the similar average total incident time.

Based on the CIE's estimated efficient cost, the average pumper cost is $37 per truck per hour.

5.2.4 Administration and billing

The administration and billing for hazmat incidents is quite a manual process. FRNSW needs to identify an appropriate party to charge, inputs their details into the FRNSW's IT platforms, and keep track of charges and bad debts. For consumables which are charged at cost (plus a 10% handling fee), operational staff need to keep track of all individual consumables used during services, and manually record the amount used at the end of a service.

For wires down incidents, the process is simpler as each electricity pole has a pole ID that FRNSW can use to identify the owner.

The CIE estimates that this administration and billing process takes an average of 15 minutes for wires down incidents and 60 minutes for other hazmat incidents. The estimated time translates into an average administration and billing cost of $19 and $84 per incident for wires down and other hazmat incidents, respectively.[15]

5.2.5 Overheads and depreciation

There are other fixed costs FRNSW incurs in attending a hazmat incident. Table 5.3 summarises cost components and how their efficient costs are estimated. Based on the CIE's analysis, the average efficient overheads and deprecation is $63 per incident for wires down and $70 per incident for other hazmat incidents.

Table 5.3 Hazmat 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 hazmat attendance cost
Depreciation	Asset depreciation for the building, computers and other equipment	4.5% of the average hazmat attendance cost
Maintenance costs	Maintenance costs building, computers, communications and other general maintenance costs	3.0% of the average hazmat attendance cost

Source: The CI.E. Efficient operating costs of providing Fire and Rescue NSW's services, Draft Report, 14 December 2021, pp 63-64.

5.2.6 Other equipment

Table 5.4 sets out the costs of other types of equipment.

The CIE estimated equipment costs for the types of equipment used in the last 5 years. The equipment costs include depreciation, annual costs of maintenance and insurance costs in some cases. The CIE used the purchase price and economic life to calculate annual depreciation. Annual maintenance costs are estimated to be about 3% of the purchase price, and insurance costs are estimated to be 50% of the maintenance costs.

The CIE found most of FRNSW's current equipment charges are not reflective of the actual cost.

We note that the CIE could not estimate the efficient costs for decontamination shelters, boats or helicopters as none were not used in the last 5 years.

Table 5.4 CIE's estimated costs - other equipment ($2021-22, per hour)

Charge Item	Current	CIE's estimates
Each hazmat delta decontamination shelter	$286	Not estimated
Each boat (including a trailer and vehicle to tow it)	$286	Not estimated
Each helicopter	$3,300	Not estimated
Each hose	$55	$37
Each fully encapsulated gas suit	$275	$99
Each spillage suit	$55	$10
Each self-contained breathing apparatus	$55	$42
Each standard gas detector	$55	$87
Each unit of specialised detection equipment	$110	$76
Trailer Chemical Decontamination foam	Not listed in Schedule 1 to the FB Regulation	$286
Diaphragm Pump	Not listed in Schedule 1 to the FB Regulation	$46

6 Assessment of different charging options

The third step in our approach for recommending hazmat charges is to consider different charging options, assess each of the options against the 7 pricing principles outlined in Box 3.3 and determine the most appropriate charging structure. This section discusses the charging options we considered and provides our assessment of each option.

Overall, we consider the following charging structure is most appropriate for FRNSW's hazmat incident attendance and best meets our pricing principles:

- A call-out fee for incidents less than 1 hour (inclusive) where the call-out fee differs between wires down and other hazmat incidents reflecting different costs of administration and billing.
- A call-out fee plus hourly variable charges for equipment for incidents more than 1 hour – the same variable charges apply to both wires down and other hazmat incidents reflecting similar equipment costs.

In the sections below we present 4 charging options we considered and provide our rationale for adopting our recommended charging option. Also, we discuss additional recommendations regarding FRNSW's hazmat charging.

6.1 Charging options we considered

We considered 4 charging options for attending hazmat incidents:

Option 1: Call-out fee plus hourly charges for total attendance time for both wires down and other hazmat incidents

a. The chargeable time is the time the appliance(s) left its station until the time the appliance(s) returned to its station.
b. The call-out fee covers administration, billing and overhead costs. The amount is different for wires down and other hazmat incidents due to significant differences in the administration and billing time.
c. Hourly charges are set out for labour and equipment per resource, and are the same for both wires down and hazmat incidents.

Option 2: Call-out fee for incidents less than one hour and call-out fee plus hourly charges for incidents more than one hour for both wires down and other hazmat incidents

a. All hazmat incidents less than 1 hour incur a call-out fee and those exceeding 1 hour incur a call-out fee plus hourly charges. The chargeable time for hourly charges is total attendance time in excess of 1 hour.
b. The call-out fee covers administration, billing and overhead costs, half hour labour costs and half hour equipment costs that include a 4-crew pumper, 1 hose and 1 gas suit.
c. Hourly charges are set out for labour and equipment per resource, and are the same for both wires down and hazmat incidents.

Option 3: Fixed charge for all hazmat incidents

a. All hazmat incidents incur a flat fixed charge.
b. The fixed charge includes labour, equipment, administration, billing and overheads, all of which are set based on the average cost per incident.

Option 4: Fixed charge for wires down incidents and call-out fee plus hourly charges for total attendance time

a. Wires down incidents incurs a flat fixed charge. The fixed charge is calculated based on the average labour, equipment, administration, billing and overhead costs per incident.
b. For other hazmat incidents, the charges set out under Option 1 applies.

Table 6.1 shows modelled charges under different options.

Table 6.1 Modelled charges under different options ($2022-23, ex-GST)

	Unit	Option 1	Option 2	Option 3	Option 4
Call-out fee					
Wires down	Per incident	$100	$335	$620	$620
Other hazmat	Per incident	$175	$480	$720	$175
Variable charges				N/A	
Each standard pumper and hazmat pumper (4 crew)	Per hour	$510	$510		$510
Labour	Per hour	$470	$470		$470
Vehicle	Per hour	$40	$40		$40
Each other hazmat vehicles and Mobile Command Centre (2 crew)	Per hour	$285	$285		$285
Labour	Per hour	$240	$240		$240
Vehicle	Per hour	$45	$45		$45
Each special operations vehicle (1 crew)	Per hour	$150	$200		$150
Labour	Per hour	$115	$165		$115
Vehicle	Per hour	$35	$35		$35

6.2 Recommended charging option

We assessed these options against the pricing principles we outlined in the Issues Paper and factors we are required to consider by the Terms of Reference. Our assessment of these options is summarised in Appendix A.

6.2.1 Charges under Option 2 satisfy all our pricing principles

Based on our assessment, we consider Option 2 is the most appropriate charging structure for attending hazmat incident attendance as it results in charges that meet all our pricing principles.

- **Cost reflective:** Our recommended call-out fee reflects the average efficient cost of a hazmat incident attendance less than one hour. For the fixed cost component, we included the average administration, billing and overhead costs per incident that the CIE estimated. For the variable component, we included half hour costs for labour and basic equipment needed for an average response less than 1 hour. We consider the "half hour" cost is appropriate as the average attendance time for incidents less than 1 hour is around 30 mins.
- **Equitable:** Charging for all hazmat incidents, except for few exceptions ensures those who contribute to a hazmat incident pay for the costs of dealing with hazmat incidents,
- **Right incentives:** Charging a small flat fee for incidents less than one hour ensures there is an incentive for electricity network operators to act promptly within an hour to avoid additional hourly charges. Around 74% of wires down incidents and around 83% of all hazmat incidents had less than 1-hour attendance time, so most hazmat incidents would incur a call-out fee only. We consider the recommended call-out fees of $335 and $480 are at a reasonable level not to create a strong disincentive for people not to report incidents to avoid a charge.
- **Transparent:** There is transparency as actual charges and associated cost elements are known prior to an incident.
- **Simple:** The recommended charging structure is easy to understand and administer as most hazmat incidents are less than 1 hour.
- **Flexible:** The recommended charging structure results in flexible charges. While most hazmat incidents had less than 1-hour attendance, there is a non-negligible number of hazmat incidents with a significantly long attendance time. Having variable charges allows FRNSW to recover the costs associated with such long incidents, while the call-out fee covers most hazmat incidents.
- **Consistent:** The recommended charging structure is consistent across different hazmat incidents.

Option 1 is consistent with FRNSW's current charging structure except:

- It has a separate fixed charging component (i.e. call-out fee) to recover administration, billing and other overhead costs.
- All incidents are chargeable regardless of attendance time as opposed to FRNSW's current practice of not charging wires down incidents under 2 hours and other hazmat incidents under 1 hour (discussed further in section 6.3).

In our view, Option 1 satisfies most of the pricing principles and is likely to result in the most cost reflective charges. However, it is likely to increase FRNSW's administrative burden as every hazmat incident attendance will require its own calculation of charges based on attendance time and resources used.

Option 3 and Option 4 do not meet several pricing principles. A fixed charge structure in Option 3 and Option 4 is likely to result in charges that are not cost reflective. It also does not provide sufficient incentives to reduce the risk of hazmat incidents – in the case of wires down incidents, a fixed charge does not provide electricity networks with incentives to get to the scene early.

6.2.2 Our recommended charges include a call out fee plus hourly charges

The call-out fee is $335 for wires down and $480 for other hazmat incidents

The recommended call-out fee includes the average costs of administration and billing and overhead costs per incident. It also includes half hour costs for an incident less than 1 hour, which includes a 4-crew pumper, a hose and a gas suit.

We consider the "half hour" cost is appropriate as the average attendance time for incidents less than 1 hour is around 22 mins. We included the cost of 1 4-crew pumper as hazmat incidents less than 1 hour required on average around 1 4-crew pumper. We allowed additional costs for 1 hose and 1 gas suit as an assumption for what additional equipment would be required for a typical response less than 1 hour.

The call-out fee for hazmat incidents is around $150 higher than wires down incidents because of higher administration costs associated with administration and billing for other hazmat incidents.

Recommended pumper charges include efficient labour and vehicle costs

Under our draft recommendation, incidents more than 1 hour will incur a call-out fee plus additional variable charges depending on the equipment used, including pumper charges.

We recommend separate pumper charges depending on the number of crew required. The recommended pumper charges are the same irrespective of whether it is a standard pumper or a specialised hazmat pumper as the CIE found that the costs do not vary between the two types of pumpers.

It is unclear whether FRNSW's current pumper charges include labour costs, and if so, how much labour costs are allocated to each pumper charge. Therefore, while we recommend pumper charges include labour costs, we present the split between labour and vehicle costs to show how much labour costs contribute to each pumper charge.

The vehicle costs include variable vehicle running costs such as fuel and tyres, and fixed costs such as depreciation. Regardless of the number of crew required, the vehicle costs do not vary across different types of pumper. It is the labour costs that contribute to the difference in costs across different types of pumper.

6.2.3 We recommend some changes to equipment charges

Under our draft recommendation, incidents more than 1 hour will incur additional equipment charges such as hose, gas suit, breathing apparatus, etc.

Table 6.2 sets out our draft recommended charges for a list of equipment. The charges are the same for wires down incidents and other hazmat incidents. This reflects the CIE's finding that there is little difference in the average cost per resource between them.

These equipment charges include depreciation, annual costs of maintenance and insurance costs in some cases. We used the purchase price and economic life to work out annual depreciation. Annual maintenance costs are estimated to be about 3% of the purchase price, and insurance costs are estimated to be 50% of the maintenance costs. To these costs, we added 10% capital allowance and estimated hourly charges based on estimated time each equipment is in use.

Our draft recommendation means some equipment charges would be higher than the current charges, and other charges would remain similar to their current levels or reduce materially in some cases.

Table 6.2 Current and recommended equipment charges ($2022-23, ex-GST)

Equipment type	Unit	Current	Recommended
Each hazmat delta decontamination shelter	Per hour	$286	$285
Each boat (including a trailer and vehicle to tow it)	Per hour	$286	$285
Each helicopter	Per hour	$3,300	$3,365
Each hose	Per hour	$55	$65
Each fully encapsulated gas suit	Per hour	$275	$65
Each spillage suit	Per hour	$55	$10
Each self-contained breathing apparatus	Per hour	$55	$65
Each standard gas detector	Per hour	$55	$65
Each unit of specialised detection equipment	Per hour	$110	$65

Note: Half of the hourly charge applies for each half hour (or part there-of) of use.
Source: Fire Brigades Regulation 2014, cl 45 and Schedule 1.

Based on the last 5 years of incident data, a couple of other types of equipment, not listed in Schedule 1 of the FB Regulation, were used regularly in hazmat responses – trailer chemical decontamination foam and diaphragm pump. The CIE estimated their efficient costs (see Table 5.4) and we took them into account in estimating the recommended charge for specialised detection equipment. We are not recommending specific charges for these two types of equipment. Instead, we are recommending FRNSW be provided with flexibility to charge at cost for the use of equipment that is not listed in the FB Regulation (see Section 6.3).

As for consumables, FRNSW currently passes through direct costs of consumables plus 10% handing costs. We recommend FRNSW continue charging consumables at cost plus 10% handling costs.

6.2.4 Our recommended charges do not include training and standby costs

Our recommended charges for attending hazmat incidents do not include training and standby costs.

- All FRNSW crew receive a basic level of hazmat training, but this level of training is required for FRNSW's majority of core services. Therefore, we consider it is not reasonable to allocate training costs to hazmat incidents.
- We have not allocated FRNSW's standby cost to the hazmat charge as FRNSW's assets are shared between its core and non-core activities. When responding to incidents, FRNSW assigns the closest available pumper/crew to the incident. For example, specialised hazmat pumpers can be used to respond to fires and standard pumpers can be sent to respond to hazmat incidents. In the 2019-20 financial year, 48% of hazmat responses were from 'standard pumpers'.[16]

6.3 Other recommendations

6.3.1 FRNSW remove the 1-2 hour thresholds for chargeable incidents

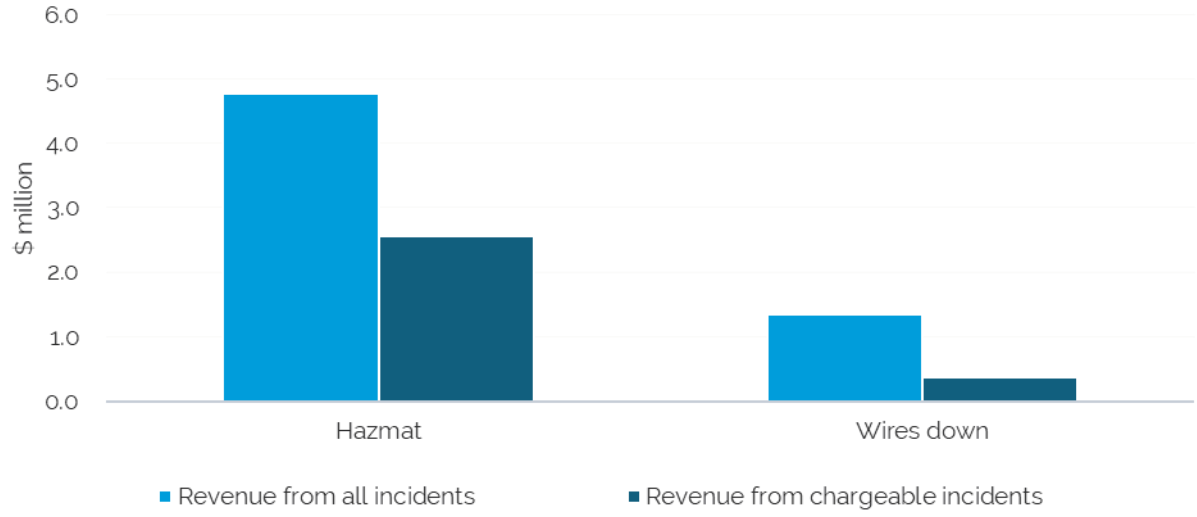
We consider that a key element in determining hazmat charges is to increase the level of cost recovery by increasing the number of charged incidents. Currently, only a small number of incidents are charged. This is because FRNSW does not charge for hazmat incidents under 1 hour and for wires down incidents under 2 hours. We understand that these time thresholds were based on an assessment that the administrative cost of raising an invoice would outweigh the value of the claim,[17] although this rationale is not set out in FRNSW's Hazardous Material Incidents Charging Policy.

Currently, most incidents fall in the non-chargeable category, with the average attendance time less than 1 to 2 hours. About 83% of hazmat incidents were under 1 hour and about 92% of wires down incidents were under 2 hours.

We recommend that FRNSW charge incidents regardless of attendance time. We consider that it is appropriate to recover the efficient administrative cost of raising an invoice through those charges. We found that forgone revenue due to the existing threshold time is estimated to be $3.2 million (based on the current charge) annually. Without the thresholds for charging, FRNSW's revenue is estimated to be more than double the current revenue.[1]

[1] FRNSW does not charge for certain hazmat incidents such as domestic or orphan waste incidents. Since we do not have the exact number of these non-chargeable incidents, we have assumed all hazmat incidents to be chargeable. Due to this, the estimated revenue without the thresholds for charging is likely to be overestimated.

Figure 6.1 Estimated revenue: all hazmat incidents vs chargeable incidents



Source: FRNSW and IPART analysis.

Where FRNSW has operational policy reasons for not charging for incidents, such as not disincentivising people from seeking FRNSW assistance for domestic hazmat incidents, we consider it should continue to not charge. We consider the costs associated with these non-chargeable incidents should be met from the Emergency Services Levy, rather than recovered from charges for chargeable hazmat incidents.

Draft recommendation

4. FRNSW remove the current 1-2 hour thresholds for chargeable incidents.

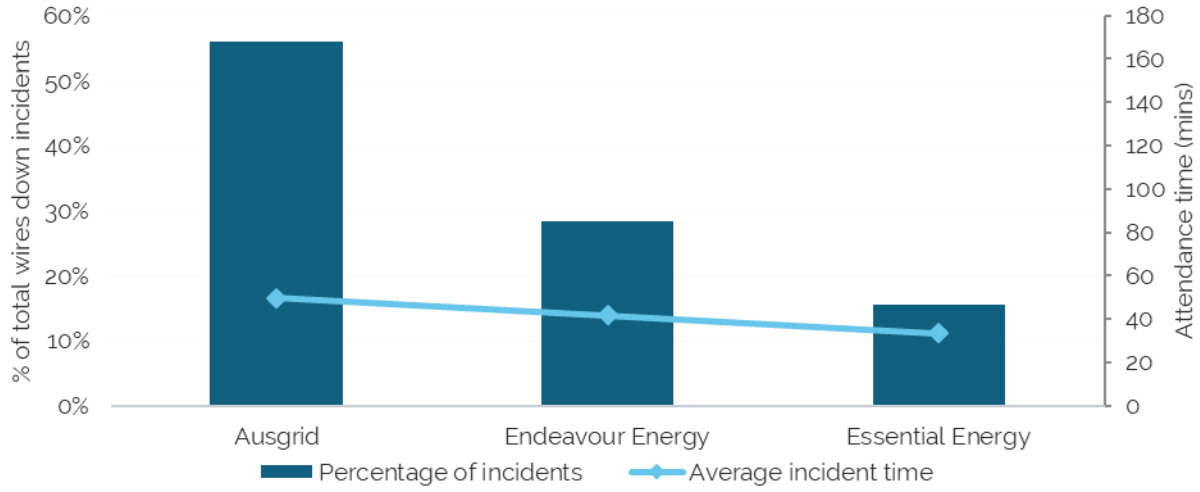
6.3.2 FRNSW charge all Distribution Network Service Providers (DNSPs)

Wires down incidents were included in FRNSW's Hazardous Material Incidents Charging Policy only relatively recently, around 2014-15.[18] FRNSW has MOUs with Ausgrid and Endeavour Energy for the management of wires down hazmat incidents. FRNSW charges for wires down incidents that extend beyond 2 hours to recover costs for all resources involved for standby purpose, including the costs incurred in the first 2 hours.

FRNSW does not charge for incidents under 2 hours and does not charge Essential Energy.

Figure 6.2 shows FRNSW's wires down attendance by network area. Wires down incidents FRNSW attended for Essential Energy represent only around 16% of total wires down incidents. The average attendance time for Essential Energy is around 30 mins, and is comparable to the other two networks which averages between 40 to 50 mins.

Figure 6.2 Wires down incidents by network area and average attendance time



Note: Attendance time excludes non-FRNSW trucks.
Source: FRNSW

FRNSW decided not to charge Essential Energy while its MoU with Essential Energy was being finalised in May 2016. It continued to not charge Essential Energy even after the MoU was finalised in February 2017.

The number of wires down incidents for Essential Energy is small compared to those for Ausgrid and Endeavour Energy, so charging Essential Energy would not significantly increase FRNSW's revenue. However, in principle we consider FRNSW should treat all DNSPs on a consistent basis. We recommend FRNSW charge Essential Energy to recover costs for all resources involved for attending wires down incidents.

Draft recommendation

5. FRNSW charge all Distribution Network Service Providers for wires down incident attendance.

6.3.3 FRNSW further consolidate a list of consumables

There is a need for a reduced reporting burden for consumables. FRNSW charges the cost of consumables based on firefighters reporting through electronic Australian Incident Reporting System (eAIRS) plus 10% handling charge, which creates a substantial reporting burden on firefighters responding to hazmat incidents.

We are aware the work is under way internally at FRNSW to reduce the reporting burden for consumables, and it is trying to improve and streamline the process of reporting and capture of information. We recommend FRNSW further consolidate a list of consumables wherever possible, possibly by bundling up consumables that are used together for a typical response.

Draft recommendation

6. FRNSW further consolidate a list of consumables wherever possible, possibly by bundling up consumables that are used together for a typical response.

6.3.4 FRNSW be provided with flexibility to charge for the use of equipment that is not listed in the FB Regulation

There is a need to improve flexibility to vary equipment lists. FRNSW has little flexibility in varying a list of standard equipment items and their costs that are specified in the FB Regulation. FRNSW advised that the relevant Schedule in the Regulation is not comprehensive. There are some items that are considered as equipment (not consumables) that are sometimes used but don't appear in the Schedule, for example, various pumps used to decant fuel and decontaminations showers. FRNSW currently add them manually.

We recommend that the FB Regulation be amended to provide FRNSW with flexibility to charge for the use of equipment at cost that is not listed in the FB Regulation.

Draft recommendation

7. FRNSW be provided with flexibility to charge for the use of equipment that is not listed in the FB Regulation.

7 Impact of our draft recommendations

The last step in making our draft recommended charges is to consider the impact of our draft recommended charges on customers and FRNSW.

Customer impact would vary depending on the type of hazmat incidents, which determine attendance time and resources used. Clearly bills for both wires down and other hazmat incidents would increase for short incidents that are currently uncharged. Table 7.1 sets out some hypothetical examples and shows that longer duration incidents may have slightly lower bills than currently.

Table 7.1 Estimated bills for various hazmat incidents ($2022-23, ex-GST)

			Wires down		Other hazmat	
Incident	**Attendance time**	**Resourced used**	**Current**	**Recommended**	**Current**	**Recommended**
Incident 1	30 mins	1 4-crew pumper	$0	$327	$0	$470
Incident 2	1.5 hrs	1 4-crew pumper	$0	$577	$635	$721
Incident 3	3.5 hrs	1 4-crew pumper	$1,481	$1,579	$1,481	$1,722
Incident 4	3.5 hrs	2 4-crew pumpers, 1 decontamination shelter (or other 2-crew vehicle)	N/A[a]	N/A[a]	$3,962	$3,677
Incident 5	8.5 hrs	3 4-crew pumpers, 1 decontamination shelter, 1 special operations response vehicle (i.e. 2 x 2-crew vehicles)	N/A[a]	N/A[a]	$15,649	$15,957

[a] FRNSW's response to wires down predominantly focuses on making the area safe before the relevant Distribution Network Service Provider resolves the issues, so do not use equipment other than pumpers.

In terms of revenue impact on FRNSW, we estimate that our recommended charges would result in an increase in its revenue from all hazmat attendance by about $6 million. Specifically, FRNSW is expected to have additional revenue of:

- $4.9 million from attending wires down incidents
- $1.1 million from attending other hazmat incidents.

Table 7.2 Estimated annual revenue under current and recommended charges ($2022-23, ex-GST)

	Current ($m)[a]	Current if charge all ($m)[b]	Recommended if charge all($m)	Difference ($m)
Wires Down	1.1	2.1	5.9	4.9
Other hazmat	0.2	0.3	1.3	1.1
Total	**1.3**	**2.4**	**7.3**	**6.0**

a. Actual revenues as reported by FRNSW

b. Revenues are calculated using current hazmat charges and assuming all hazmat incidents are chargeable.

A Assessment of hazmat charging options against pricing principles

	Cost reflective	Equitable	Right incentives	Transparent	Simple	Flexible	Consistent
Option 1 Call-out fee plus hourly charges for total attendance time	✓ Call-out fee is set to capture the average fixed cost of an incident. Most cost reflective as all incidents are charged at efficient cost	✓ Those who contribute to a hazmat incident pay for the costs of dealing with hazmat incidents.	✓ Provides appropriate incentives to reduce risk of hazmat incidents	✓ Actual charge known	✗ Easy to understand but longer to process charging as every incident will need to be looked at.	✓ Charging structure can be applied to all incidents	✓ Charging structure is consistent across different hazmat incidents
Option 2 Call-out fee for incidents <= 1 hour & Call-out fee plus hourly charges for incidents > 1 hour	✓ Call-out fee appropriately reflects the average cost as most incidents are less than 1 hour.	✓ Those who contribute to a hazmat incident pay for the costs of dealing with hazmat incidents.	✓ Provides appropriate incentives to reduce risk of hazmat incidents	✓ Actual charge known	✓ Easy to understand and administer in terms of charging as most hazmat incidents are less than 1 hour	✓ Charging structure can be applied to all incidents	✓ Charging structure is consistent across different hazmat incidents
Option 3 Fixed charge for both wires down and other hazmat incidents	✗ Fixed charge is not suitable given diversity of hazmat incidents. Some hazmat incidents can take a long time and resourcing requirement can vary significantly across incidents.	✓ Those who contribute to a hazmat incident pay for the costs of dealing with hazmat incidents.	✗ May not provide strong incentives to arrive at the scene early for network operators.	✓ Actual charge known	✓ Easy to understand and administer	✗ Fixed charge does not provide flexibility	✓ Charging structure is consistent across different hazmat incidents
Option 4 Fixed charge for wires down; Option 1 for other hazmat incidents	✓ Most wires down incidents are less than 2 hours and their resourcing requirement does not vary.	✓ Those who contribute to a hazmat incident pay for the costs of dealing with hazmat incidents.	✗ May not provide strong incentives to arrive at the scene early	✓ Actual charge known	✗ Two different structures mean it's not easy to understand or administer	✗ Fixed charge does not provide flexibility	✗ Different charging structure between two hazmat categories

[1] Fire and Rescue NSW Act 1989 No 192, s 3(1).
[2] The CIE, Efficient operating costs of providing Fire and Rescue NSW's services, Draft Report, 14 December 2021, p 57.
[3] Australian Radiation Protection and Nuclear Safety Agency, *Radiation Protection Series No. 13 - Code of Practice and Safety Guide for Safe Use of Fixed Radiation Gauges*, 2007 (updated January 2015), s 3.1 (FRNSW is the fire authority for the purposes of that section).
[4] *Work Health and safety Regulation 2017*, cl. 361 and 557; *Explosives Regulation 2013*, cl 90.
[5] FRNSW Act, s40(4A).
[6] FRNSW Act, s40(4C).
[7] Fire Brigades Regulation 2014, cl 45 and Schedule 1.
[8] Legislative Assembly Hansard – 10 November 1993, Fire Brigades (Hazardous Materials) Bill 1993, second reading speech.
[9] The CIE, Efficient operating costs of providing Fire and Rescue NSW's services, Draft Report, 14 December 2021, p 61.
[10] The CIE, Efficient operating costs of providing Fire and Rescue NSW's services, Draft Report, 14 December 2021, p 61.
[11] The CIE, Efficient operating costs of providing Fire and Rescue NSW's services, Draft Report, 14 December 2021, p 62.
[12] The CIE, Efficient operating costs of providing Fire and Rescue NSW's services, Draft Report, 14 December 2021, p 62.
[13] The CIE, Efficient operating costs of providing Fire and Rescue NSW's services, Draft Report, 14 December 2021, pp 64-65.
[14] The CIE, Efficient operating costs of providing Fire and Rescue NSW's services, Draft Report, 14 December 2021, p 62.
[15] The CIE, Efficient operating costs of providing Fire and Rescue NSW's services, Draft Report, 14 December 2021, pp 63-64.
[16] The CIE, Efficient operating costs of providing Fire and Rescue NSW's services, Draft Report, 14 December 2021, p 65
[17] Legislative Assembly Hansard – 10 November 1993, Fire Brigades (Hazardous Materials) Bill 1993, second reading speech
[18] FRNSW, Hazardous Material Incidents Charging Policy (version 07 – March 2020).