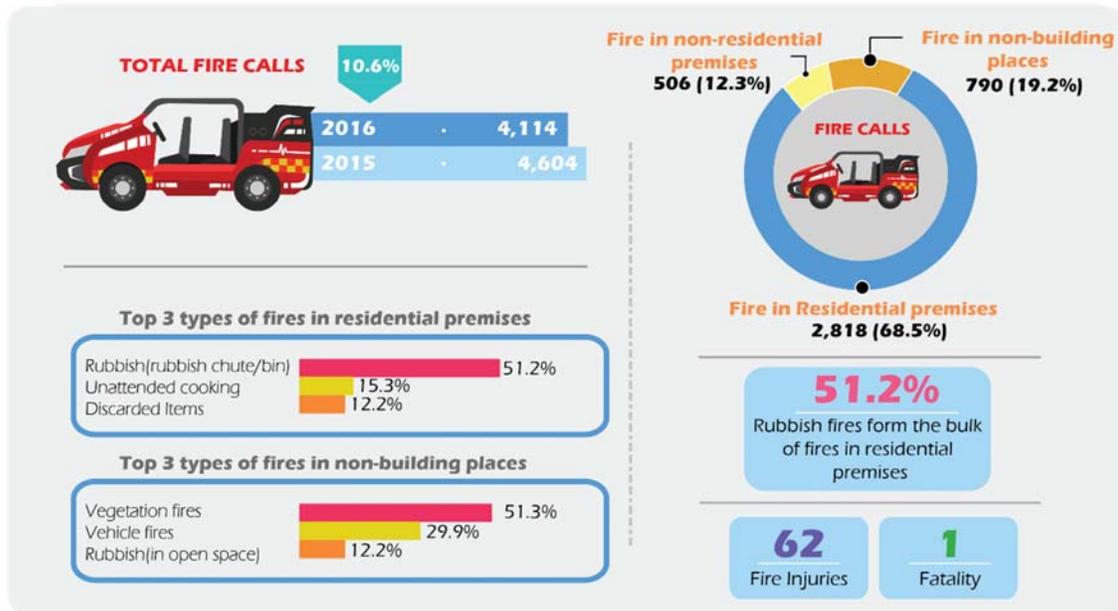


OVERVIEW



SCDF responded to 4,114 fire calls in 2016 - the lowest number of fire calls recorded since 1978 (refer to Annex A for the number of fire calls from 1978 - 2016). This was a decrease of 10.6% from 2015.

2. Of the total number of fires in 2016, 68.5% involved residential premises (private and public), 12.3% involved non-residential premises (commercial, industrial, social and communal) and 19.2% involved non-building places (eg. vegetation, rubbish in open spaces, vehicles on the road).

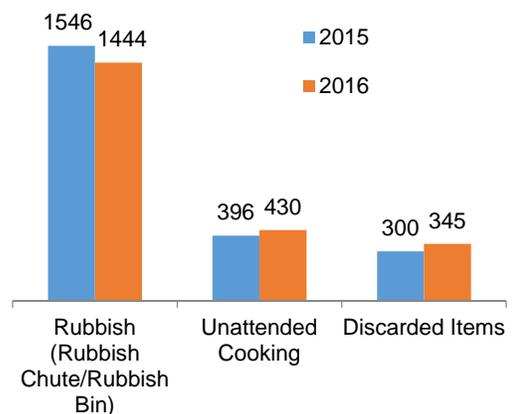
Fires in Residential Premises

3. A total of 2,818 fire incidents occurred in residential premises in 2016. This was a decrease of 2.8% from 2015. The top three types of fires in residential premises are in Chart 1.

Rubbish Fires Remain High

4. While rubbish fires decreased by 6.6% between 2015 and 2016, these fires continued to form the bulk of residential fires at 51.2%.

Chart 1: Top three types of fires in residential premises



- Rubbish fires can be prevented by not throwing lighted materials like burning embers and cigarette butts into the rubbish chute or rubbish bin.
- Rubbish fires are best managed in the initial stages of the fire by first responders, even before the SCDF officers arrive. Such fires can be easily put out by dousing with water. Our 995 emergency call centre operators would also be able to guide callers over the phone to put out such fires.
- In 2016, about 20% of the rubbish fires were put out by alert members of the public prior to SCDF's arrival at the scene.
- We would like to remind members of the public to stay vigilant to such occurrences of fires in rubbish chutes or rubbish bins in their neighbourhood.

Fires in Non-Residential Premises

5. SCDF responded to 506 fire incidents in non-residential premises in 2016. A breakdown of fire incidents in these premises is in Chart 2.

Decrease in Fires at Warehouses and Factories

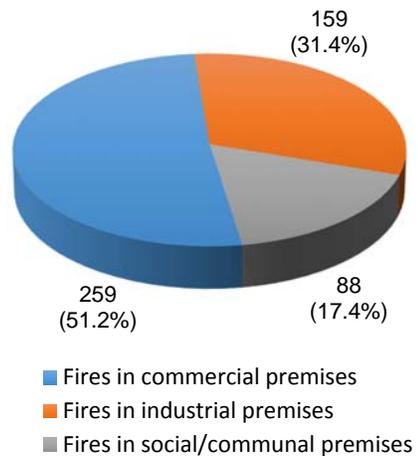
6. There was an 8.9% decrease in the number of fires at warehouses and factories from 101 cases in 2015, to 92 cases in 2016.

7. To further increase awareness about fire safety and exchange best practices among stakeholders, SCDF and the National Fire and Civil Emergency Preparedness Council (NFEC) have been organising various fire safety workshops and seminars which were attended by Company Emergency Response Team (CERT) members, security officers, employees and trade associations. During these seminars, participants learnt about good fire safety practices and also received basic first-aid training and practical tips on emergency response skills.

Increase in Fires at Shopping Complexes

8. In 2016, the number of fires in shopping complexes increased by 25%, from 48 cases in 2015 to 60 cases in 2016. In view of this, SCDF worked with the NFEC to conduct a fire safety awareness workshop for fire safety managers (FSMs) of shopping complexes. Relevant case studies were presented and discussed with the workshop participants. SCDF will also be stepping up enforcement checks at shopping complexes to ensure fire standards are observed.

Chart 2: Fires in non-residential premises



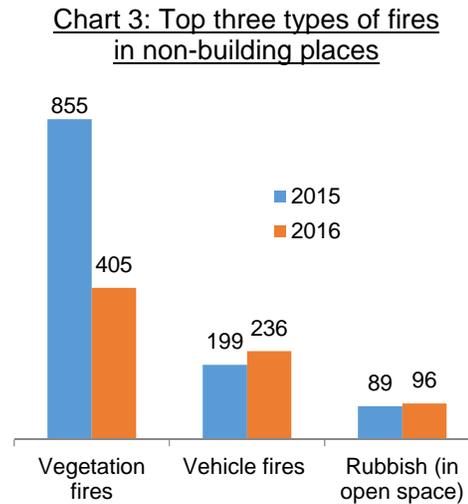
Fires in Non-Building Premises

9. There was a total of 790 fire incidents in non-building premises in 2016. This was a significant decrease of 34.2% from 1,201 cases in 2015. It was mainly due to a substantial dip in vegetation fires, from 855 cases in 2015 to 405 cases in 2016. The top three types of fires in non-building places are in Chart 3.

Vehicle Fires Increased by 18.6%

10. The number of vehicle fires increased by 18.6% in 2016. Most of these fires occurred while the vehicles were travelling on the road. The main causes of these fires were of electrical origin and overheating.

11. SCDF will continue to raise public awareness of the causes of vehicle fires and how to prevent them.



To prevent your vehicle from catching fire, you should:-

- Service your vehicle regularly.
- Ensure that the vehicle's electrical, engine and fuel systems are checked for any defect during each servicing session.
- Conduct visual checks for any signs of oil leakage from your vehicle.

Causes of Fires

12. Dropped light cases remained the main contributing cause of fires, accounting for 2,169 cases (52.7%) of all fires in 2016.¹ Fires caused by electrical origin was the next highest, with 660 cases (16%).

13. With the soaring popularity of electric bicycles and personal mobility devices² (PMDs) in Singapore in recent years, SCDF has also witnessed an increase in the number of fires involving the batteries of such products. A large proportion of battery fires reported involved rechargeable batteries, which are often used in electric bicycles and portable electronic devices. A breakdown of fire incidents involving these products is in Chart 4.

¹ Dropped light refers to indiscriminate disposal of lighted materials such as lighted cigarette butts that were not completely extinguished, embers from charcoal and lighted incense sticks.

² Personal mobility devices include skateboards, kick-scooters, electric scooters, hoverboards and e-wheels.

		2012	2013	2014	2015	2016
Electric Bicycles		8	2	5	14	17
PMDs		-	-	-	1	14
Powerbanks		0	1	6	1	3

Chart 4: Number of reported fires involving batteries of electric bicycles, personal mobility devices and powerbanks

14. Battery fires can be caused by faulty electrical circuitry that may lead to short-circuiting of the batteries. The high current drawn by faulty electrical circuitry can generate sufficient heat to ignite the devices or materials in close proximity to the devices.

15. Rechargeable batteries that are left charging over long periods of time would result in overcharging. Overcharging can cause permanent damage to the battery and result in battery swelling. Older models of rechargeable batteries are not fitted with power cut-off sensors to prevent overcharging which could lead to sparking off a fire. Such fires have the propensity to spread easily, particularly when there are combustible materials around.

On 8 July 2016, a fire started in the living room where an individual had charged his electric bicycle battery for several hours. Investigations revealed that the cause of fire was accidental in nature and of electrical origin (battery).



Close up view of the burnt e-bicycle battery



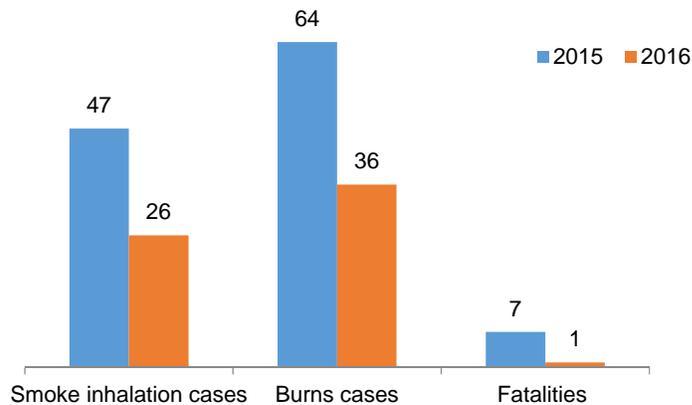
Fire and smoke damages sustained in the living room

16. For fire safety tips on the prevention of battery fires, please refer to [Annex B](#).

Fire Injuries and Fatalities

17. There were 62 fire injuries in 2016. This was a decrease of 44.1% from 2015. There was one fire fatality in 2016, compared to seven fatalities in 2015.³ The fire fatality in 2016 was a result of a residential fire at Hume Avenue on 30 April 2016. Refer to Chart 5 for a breakdown on the types of fire injuries and fatalities in 2015 and 2016.

Chart 5: Breakdown of fire injuries and fatalities

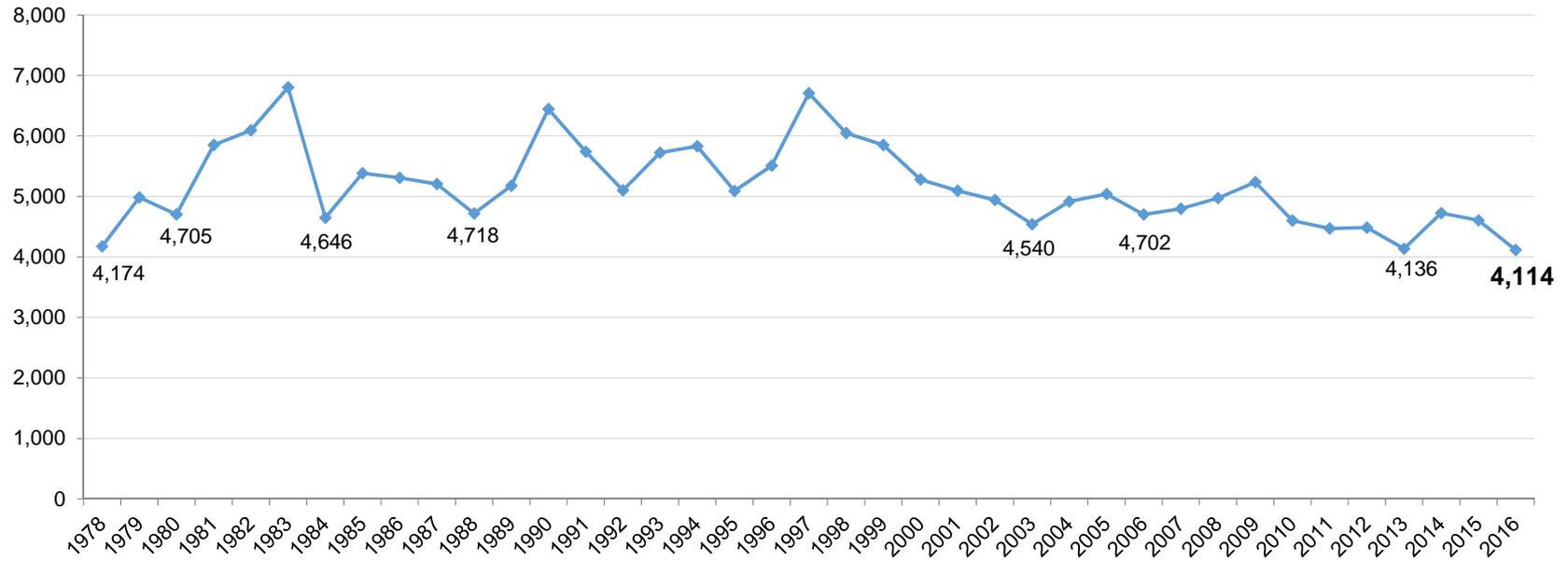


³ The 2015 SCDF statistics release in February 2016 reported four fire fatalities which occurred in 2015. The three additional fire fatalities were confirmed in April 2016:

- A fire incident within a residential unit at 230 Jurong East St 21 on 13 October 2015;
- A residential unit fire at 78 Redhill Lane on 19 November 2015; and
- A residential unit fire at 6 Geylang Lor 10 on 28 November 2015.

Total Number of Fire Calls from 1978

Number of Fire Calls



– 2016

Prevention of Battery Fires

Learn about Battery Fire Prevention



BEFORE USE

Check for Damage and Deformities

- Examine batteries for damage
- Refrain from charging damaged batteries as it may lead to overheating

DURING USE

Allow Heat Dissipation

- Do not block air vents by placing electronic devices on upholsteries

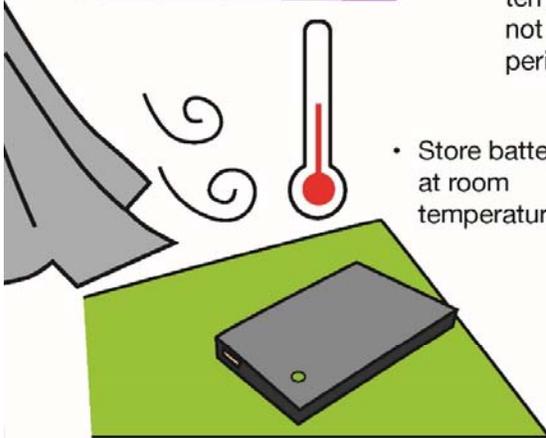


- Charge batteries of electronic devices on hard flat surfaces, such as on a table, to allow optimal dissipation of heat

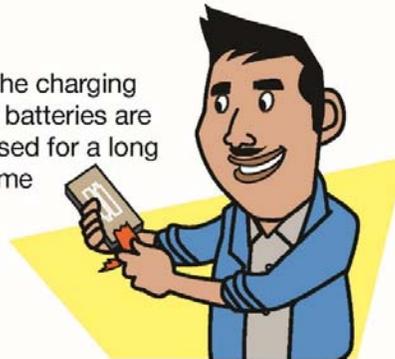


AFTER USE

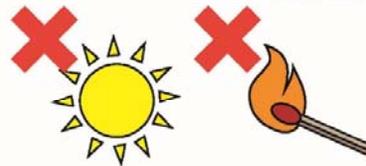
Proper Storage



- Tape over the charging terminals if batteries are not to be used for a long period of time



- Store batteries at room temperature



- Avoid prolonged direct heat exposure and keep away from combustible or flammable materials

The manual says to **unplug** the power bank when all 5 indicator lights are green!



AFTER USE

Avoid Overcharging

- Do not overcharge batteries – some battery models do not have a power cut-off function
- Avoid over-charging your power bank
- Avoid charging it overnight

Look out for the **SAFETY Mark** on power adaptors when shopping for electronics.



For more information, please go to [www.scdf.gov.sg/ community-volunteers/publications](http://www.scdf.gov.sg/community-volunteers/publications)

A SAFETY MESSAGE
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