



# ALL ELECTRIFIED TRANSPORT LIB FIRE INCIDENTS

Global, 1st January to 31st March 2023

A comparison of passenger electric vehicles (EVs), battery electric buses (BEB), battery electric trucks (BET) & light electric vehicles (LEV) such as e-bikes, e-scooters etc

## Why EV FireSafe?

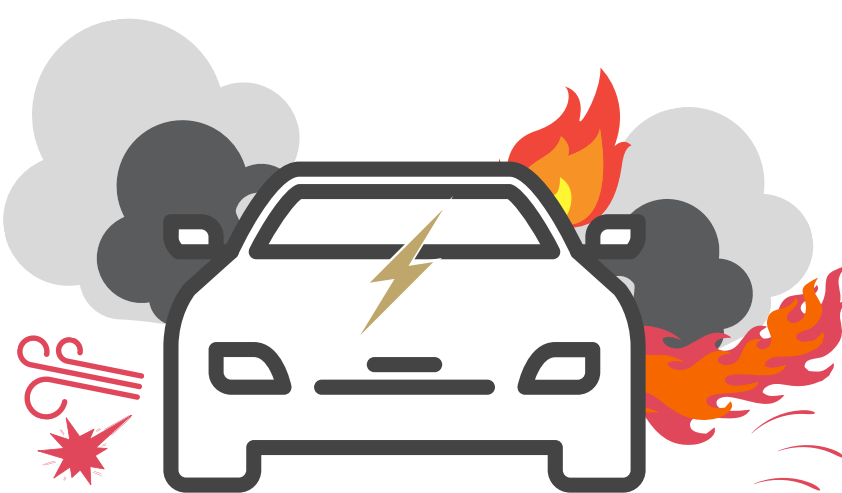
Transport emissions account for 25% of global greenhouse gas emissions, which has led to rapid electrification

EV battery fire incidents have led to concerns about emergency responder safety when attending lithium-ion battery fires

To enhance emergency responder safety, we researched electrified transport HV battery fires from 1st Jan to 31st March 2023

## EV, BEB, BET & LEV LiB fires

### Passenger EVs



23

Battery fires

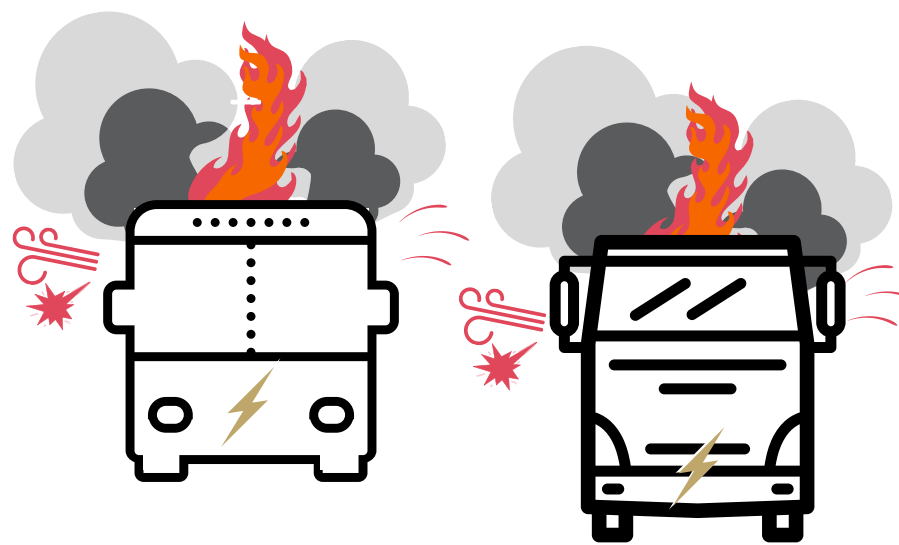
8

Injuries

4

Fatalities

### Electric buses & trucks



2

Battery fires

0

Injuries

0

Fatalities

1

Battery fire

0

Injuries

0

Fatalities

### Light electric vehicles



64

Battery fires

62

Injuries

9

Fatalities

PLUS a further 9 fatalities in April 2023 (incl 5 children)

## Why are LEV battery fires more prevalent & a higher risk to life & property?

### Road-registered EVs:

LiB pack size:

10 - 100 kWh

Avg incident duration for pack burn:

3-5 hours (depending on a range of factors, incl SoC)

Risk profile:

- Primarily charged & operated in open spaces; lower risk of fire spread to structures
- Very high quality LiB cells & BMS
- Protective LiB pack casing; lowers damage risk

### Light EVs:

LiB pack size:

1 - 2 kWh

Avg incident duration for pack burn:

5-15 minutes

Risk profile:

- Commonly charged in structures; high risk of fire spread, particularly in private homes
- Lower quality LiB cells & BMS in some brands
- Susceptible to LiB cell abuse in normal operation