# ALL ELECTRIFIED TRANSPORT LIB FIRE INCIDENTS

## Global, 1st January to 30th June 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

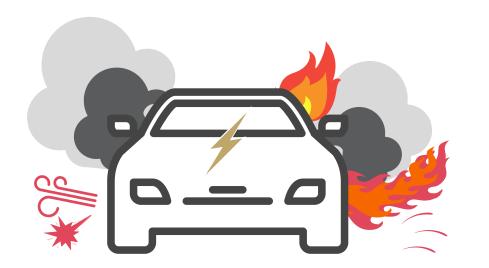
## Why EV FireSafe?

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 electrifed transport HV battery fires from 1st Jan to 30th June 2023

#### EV, BEB, BET & LEV LiB fires

Passenger EVs

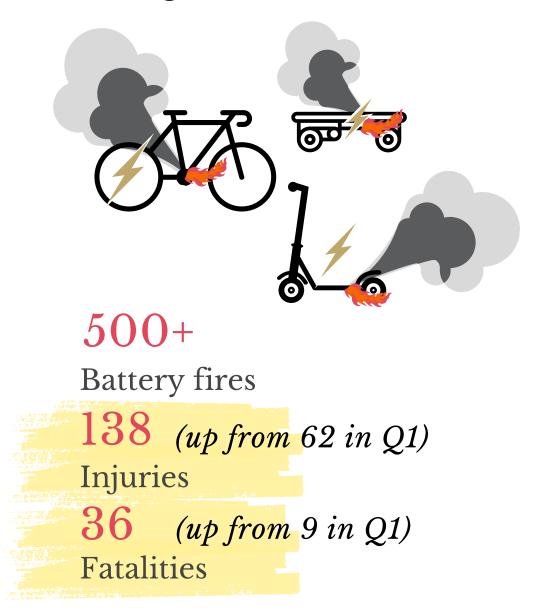


44
Battery fires
15
Injuries

Electric buses & trucks



Light electric vehicles







**O** Fatalities

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

## Road-registered EVs:

*LiB pack size:* 10 - 300+ kWh

Avg incident duration for pack burn: 3-5 hours (depending on a range of factors, incl SoC)

#### Risk profile:

- Very high quality LiB cells & BMS
- Highly protective battery pack casing, low wear & tear in normal daily use
- Primarily charged & operated in open spaces, posing a lower risk to life & property safety

*Light EVs: LiB pack size:* 1 - 2 kWh

Avg incident duration for pack burn: 5-15 minutes

Risk profile:

- Low quality LiB cells &BMS in some brands
- High wear & tear during normal daily use
- Commonly charged inside homes, posing a high risk to life & property safety

\*Not exhaustive. From more than one online source, interviews, first hand accounts, videos, images, academic & fire agency reports & online training

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