



## **1. In other countries with high uptake of personal mobility devices and high-density housing, for example China, how have fire risks been managed?**

The majority of the first world is facing an increasing number of thermal runaway events of Personal Mobility Devices (PMD's).

Some fire services, such as FRNSW, London Fire Brigade (LFB), New York Fire Department (FDNY) are claiming to have daily incidents.

Some locations, such as Chicago, believe they are not facing the same issues as the rest of the world.

This is directly explained as they lack the awareness related to incidents due to an absence of incident data being recorded.

EV FireSafe does have incidents recorded globally and nowhere seems immune or protected from these events.

EV FireSafe has been unfunded to track PMD incidents, however, we have been internally funding this work.

The amount of incidents would require at least a full time position to suitably address.

We are aware of multiple deaths directly caused by the failures of PMD's, with hundreds of others hospitalised from these incidents that end up costing hundreds of millions of dollars.

These people hospitalised usually involve:

- bystanders within shopping centres,
- other occupants of high density housing impacted by just being in the same building as an incident, or ,
- samaritans attempting to assist in the incident without the required personal protective equipment or clothing, mainly respiratory protection.

[Singapore is a great example of a location that has curbed its PMD incident rate.](#)

This was achieved by stringent safety standards including UL2272 -

<https://www.ul.com/insights/ul-2272-and-the-safety-of-personal-e-mobility-devices>

Although there has been a marked reduction in incidents, there are still cases occurring. These can partially be attributed to;

- legacy devices
- wear & tear
- non-compliance
- improper charging practices

New York City has also introduced laws requiring the sale of a PMD within the New York City boundaries to require UL2272 compliance.

NYC is also introducing further restrictions and guidance, such as:

- Any building banning internal storage or charging is required to provide an alternative solution, such as an external location and approved storage & charging facility.
- Banning the sale, lease or rental of any device not meeting the required standards
- Banning the assembly or reconditioning of products using cells from used products of any sort

NYC knows it is facing a further compliance issue, where they are readily finding non-certified PMD's displaying UL2272 compliance with counterfeit labelling.

[NYC has also recently charged a PMD seller with criminal offenses related to the "egregious conditions and fire code violations"](#) related to the improper storing of lithium-ion batteries, storing loose lithium-ion battery cells, and other fire code violations.

[A second person has also been arrested for a separate property undertaking the same dangerous operations](#) "On Monday, April 29, FDNY Fire Marshals and the Bureau of Fire Prevention inspected Wilson's E-Bike store located at 101-19 Queens Blvd. At the conclusion of the inspection, Mr. Wei Chen was served with three summonses by BFP personnel and was arrested by FDNY Fire Marshals."

EV FireSafe has attempted to reach out to ACCC on several occasions but have not been able to establish a contact.

It would be greatly appreciated if the NSW Parliament could provide introductions to enable EV FireSafe to support the wider Australian community and address problem LiB products as best possible using our subject matter expertise and global database information.

## **2. Do you have concerns about the larger lithium batteries that are second battery systems in vehicles such as caravans or trailers?**

There are numerous levels of quality of Lithium-ion batteries that are being imported into Australia, and the caravanning, RV and trailer space is just one area of concern.

There are little in the way of standards addressing the quality of the cells being used, the level of battery management systems installed, and it appears no enforcement of what global standards there are. There is a standard for e-bikes, however, there is not for e-scooters for example.

Specifically in the area of "house" or "auxiliary" batteries being used in caravans, motorhomes, or RV's, Australia and New Zealand has recently updated the Standard **AS NZS 3001.2.2022**.

This Standard, enforced from November 2023, requires that Lithium-ion batteries installed within the habitable spaces of a vehicle shall be installed within a suitable container and vented to the external area of the vehicle, or mounted externally in a suitable location and container.

This Standard is required for all new caravans, motorhomes, or RVs in Australia and New Zealand, or where a unit is being upgraded from lead acid batteries to lithium-ion batteries.

With the proliferation of Lithium-ion batteries across all areas of energy creation, storage, or use, society can benefit from the increase in energy density and the reduction in weight. This is very relevant when used in mobile applications and EV FireSafe support and encourage this, however, it would be our wish that there is enhancement of information, training and awareness across both industry and consumers addressing:

- early warning signs of thermal runaway
- safe installation, operation or use, and storage
- safe disposal of LiB's where there is a concern
- firefighting awareness, strategies and tactics
- potential signage for responder awareness and safety

- enhancement of the Standard to prescribe testing requirements for LiB enclosures that is not currently addressed

We are still seeing too many examples of LiB's being treated exactly the same as a lead acid battery, where the early signs of thermal runaway have been ignored and the incidents have escalated.