



Calgary Fire Department - Fire Safety Advisory

SAFETY BULLETIN

Lithium-ion battery charging in hotels, motels and sleeping accommodations

Background

A recent fire in Calgary involved multiple lithium-ion batteries that were being charged simultaneously inside a hotel room. Lithium-ion batteries should not be charged in hotel rooms or other sleeping accommodations. Where charging of large quantities or multiple lithium-ion batteries is required, charging should occur only in designated industrial or commercial environments equipped to manage the associated fire risks.

Lithium-ion battery failures can result in a rapid and intense fire event known as thermal runaway. Once thermal runaway begins, fires can spread quickly, produce large volumes of toxic smoke, and may be difficult to extinguish.

Fire risk factors

The risk of fire increases when:

- Multiple batteries are charged simultaneously.
- Batteries are charged unattended.
- Batteries are charged overnight.
- Batteries are damaged, modified, or of unknown condition.
- Batteries are charged in sleeping accommodations or locations where occupants may not immediately detect a fire.
- Parallel charging systems are used to charge numerous batteries at the same time.

Guidance for hotels and accommodation providers

Hotels, motels and similar occupancies should consider:

- Prohibiting lithium-ion battery charging within guest rooms.
- Establishing designated charging locations where appropriate.
- Developing policies addressing the charging, storage and use of lithium-ion batteries by guests and contractors.
- Educating staff on recognizing lithium-ion battery fire hazards.

Recommended practices

The Calgary Fire Department recommends that lithium-ion battery charging:

- ✓ Be conducted only in designated industrial or commercial workspaces specifically designed for battery charging and monitoring.
- ✓ Occurs in locations equipped with appropriate fire protection systems and emergency response procedures.
- ✓ Be continuously monitored by trained personnel while charging is underway.
- ✓ Follows manufacturer charging instructions and uses compatible charging equipment.

Practices to avoid

The Calgary Fire Department advises against:

- ✗ Charging lithium-ion batteries in hotel rooms, motel rooms, dormitories, apartments, residential occupancies, or other sleeping accommodations.
- ✗ Charging batteries while occupants are sleeping.
- ✗ Charging multiple batteries simultaneously in lodging facilities or temporary accommodations.
- ✗ Leaving batteries unattended while charging.
- ✗ Charging batteries that show signs of damage, swelling, overheating, or physical deterioration.