



LEADING THE ELECTRIC VEHICLE REVOLUTION

EV EMERGENCY FACT SHEET

Dangerous weather events and natural disasters are becoming increasingly frequent and destructive across the United States. Regardless of the type of vehicle you drive, it is harrowing to endure and escape an emergency. **The Veloz Communications Working Group has developed the following fact sheet to help illustrate the benefits of EVs during emergencies.**

TOPLINES:

- EVs fare the same or better than gas vehicles in extreme weather and other emergencies.
- EVs catch fire far less often than their gasoline counterparts. The public can feel confident in the safety of EVs.
- EVs can provide backup energy to homes, appliances and the grid when emergencies leave you or your community stranded or without power.
- **EVs fare just as well, if not better, than gas vehicles during emergencies that result in blackouts or evacuation.**
 - Blackouts are common during and after natural disasters, shutting down gas stations - which cannot pump fuel without electricity - and EV chargers.
 - Severe weather can cause catastrophic damage to gasoline infrastructure, impacting fuel supply and prices.
 - The range of an EV does not significantly decrease while sitting in evacuation traffic jams, whereas a gas-powered car wastes about half a gallon of gas every hour while idling.
 - EVs are more likely to be fully charged at the start of an emergency because 86% of EV owners have home chargers.
 - A Level 1 EV charger fits in the trunk of a car and connects to any standard 120v AC outlet. While it's not the fastest option for recharging an EV, it offers unprecedented flexibility in emergencies as it can be charged with a generator.

- **An EV is much less likely to catch fire than a gas car.**
 - In the U.S., traditional gas vehicle fires occur at a rate of roughly one every 2 to 3 minutes nationwide. That's thousands of fires annually.
 - And, there are about 25 fires per 100,000 EVs sold, compared with about 1,500 fires per 100,000 gas vehicles.
 - In Europe, one of the world's most electrified car markets, gas vehicles were about 20 times more likely to catch fire than EVs.
 - Organizations like the National Fire Protection Association have developed free training programs for firefighters, police, and EMS personnel that focus on effectively addressing fires involving lithium-ion batteries in EVs.
 - Manufacturers are continually enhancing the safety features of EVs to ensure they remain reliable under various conditions, including natural disasters.
 - Other resources:
 - evfiresafe.com

- **EVs and gas vehicles both struggle in extreme weather, whether it's too hot or too cold.**
 - In extremely cold weather, traditional gas cars are less efficient, batteries often die, and fuel lines can ice up.
 - Typically, in very cold weather, EVs can temporarily lose some efficiency, impacting range. However, with no lubricants, belts or liquid fuel, fewer potential problems would prevent an EV from working in the cold.
 - In extremely hot weather, traditional gas car batteries can get damaged, and engines overheat, risking blown head gaskets.
 - EVs retain 95% of their range in temperatures of 90 degrees Fahrenheit, and 80% in much higher temperatures.
 - Steps can be taken to increase range and support charging with EVs in extreme heat and cold.

- **EVs have the potential to support the electric grid and mitigate the impacts of an emergency or even prevent blackouts.**
 - EVs are batteries on wheels. New technology will allow households and businesses to use the energy stored in EVs to relieve strained grids, store energy, and provide electricity when it's needed most.

- Called “vehicle to grid” or V2G, there are numerous ways that EVs can help provide electricity to the grid and more energy security. Programs testing this technology are already underway.
- While a typical home backup battery stores about 13.5 kilowatt-hours, many EVs carry 40-100+ kilowatt-hours of stored energy. In practical terms, that means a single EV can hold several times more electricity than a home battery system.
- The Chevrolet Equinox EV, for example, carries a battery that supports bidirectional power, allowing it to run a home’s essential needs for multiple days. Larger electric trucks store even more energy, with the potential to turn a single vehicle into a powerful backup resource during extended outages.
- During public safety power shutoffs or other unplanned outages that can last hours or days, EVs can keep food from spoiling, medical equipment running, phones charged, and families connected.