



Electric Vehicles & Extreme Weather

Electric vehicles (EVs) play an important role as Florida looks for ways to increase resilience to catastrophic storms, reduce transportation costs and reduce air pollution.

Currently, Florida ranks 2nd in the nation in EV ownership with over 100,000+ EVs registered in the state. In the wake of recent hurricanes, it's important to evaluate how Floridians benefit from electric vehicles during extreme weather events.

Safe Gas and diesel powered vehicle emissions contain toxic pollutants such as carbon monoxide, formaldehyde and benzene that can trigger health problems such as asthma, and accelerate climate change.¹

Traditional gas vehicles are 60 times more likely to catch fire, and their reliance on flammable fossil fuels can become explosive, multiplying the risks according to the National Transportation Safety Board.²

Insurance Institute for Highway Safety (IIHS) research injury claims are substantially less frequent in EVs compared to gas-powered vehicles.³

Gas-powered vehicles have the most manufacturer recalls for fire risk defects⁴

1,530 fires

Per 100,000 gas-powered vehicles

25 fires

Per 100,000 electrically charged vehicles



Reliable

Modern EVs have a range similar to their gas counterparts and can go 200+ miles on a single charge and can be fully charged in 30 minutes using a Level 3 DC Fast Charger.

Gas supply chain delays, damaged or delayed distribution networks, long lines, power failures and disabled gas pumps.

Florida has 7,500+ public charging stations along interstate and highway corridors and is adding more weekly.

Unlike gas-powered vehicles, EVs are capable of idling for hours and even days at a time because they do not use energy while stationary making them ideal in traffic.

Backup Power

An increasing amount of electric vehicles offer bidirectional charging, allowing their batteries to power homes, provide air conditioning, keep appliances and digital devices running during power outages, extreme weather emergencies, and other periods of low energy supply or high energy demand.⁵



Ford F-150s powered homes, digital devices and appliances after Hurricane Ian ravaged Florida.

What's next for Electric Vehicles

More Public Charging Stations

Congress allocated \$7.5 billion for 500,000 new public charging stations to be built within the next several years. With this installation there will be 4 times the number of existing gas stations.

Infrastructure Funding

Over the next 5 years, Florida will receive \$198 million in funding from the National Electric Vehicle Infrastructure (NEVI) program to install charging stations and electric vehicle supply equipment for installation every 50 miles along 4,000 miles of hurricane evacuation routes, interstates and alternative fuel corridors.

As with any new technology it is important that emergency response strategies are updated and that training is available for all emergency responders. Manufacturers publish emergency response guides for their vehicles and offer training for emergency responders. The National Fire Protection Association has training and information resources available at evsafetytraining.org.⁶

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¹ <https://www.epa.gov/dera/learn-about-impacts-diesel-exhaust-and-diesel-emissions-reduction-act-dera>

² <https://www.kbb.com/car-news/study-electric-vehicles-involved-in-fewest-car-fires/>

³ <https://www.iihs.org/news/detail/with-more-electric-vehicles-comes-more-proof-of-safety>

⁴ <https://www.autoinsuranceez.com/gas-vs-electric-car-fires/>

⁵ <https://www.thedrive.com/news/these-ford-f-150s-became-their-owners-lifelines-as-hurricane-ian-ravaged-florida>

⁶ https://afdc.energy.gov/vehicles/electric_maintenance.html