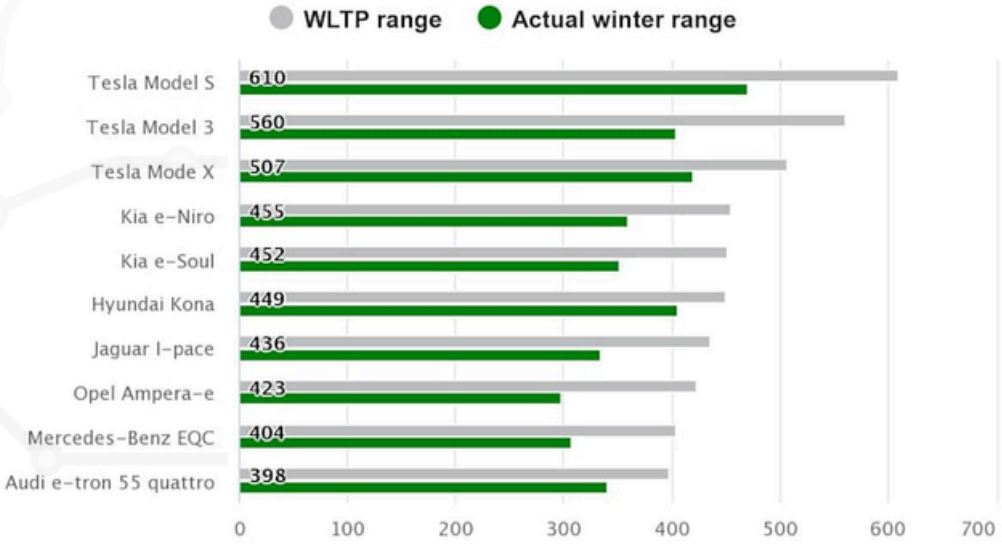
EV Safety & Reliability: What You Might Not Know

Electric vehicles are showing up everywhere now — from snowy backroads in Vermont to suburban school pickups and weekend hardware store runs. But for a lot of people, questions about safety, cold weather, and long-term reliability still linger. Millions of drivers already rely on EVs in extreme heat, freezing winters, and on long rural roads. We looked into what the data and real-world use tell us

How do EVs do in the cold?

EVs are reliable in harsh winters — but like any car, let's understand how they work:

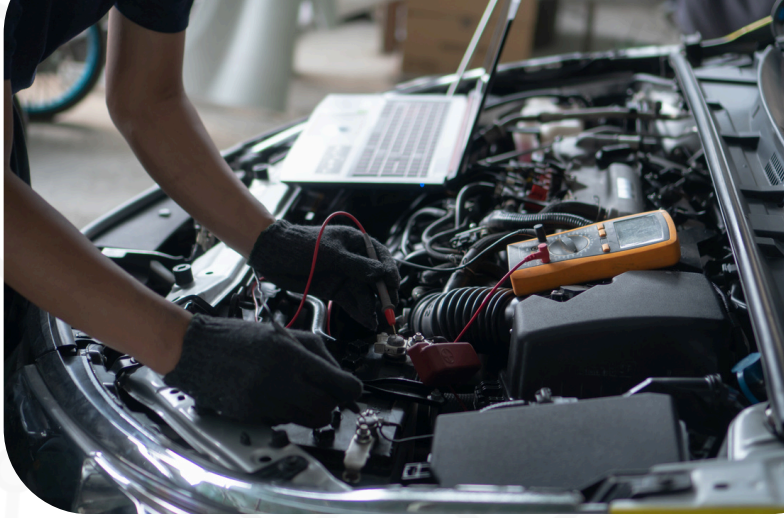
- EVs are designed for winter, with built-in battery systems and cabin heaters that begin working instantly. No matter how cold it gets outside, EVs are ready to go
- With a low center of gravity, instant torque control, and increased traction from the weight of the battery, EVs can handle a snowy road
- All vehicles perform differently in extreme cold, EVs included. On the coldest days, you will likely see 20-40% less driving range. But as soon as the weather warms up again, driving range will return to normal with no lasting effect on the battery



Source: Recurrent Auto, Real Range for Electric Cars by Temperature & Weather

* Worldwide Harmonized Light Vehicle Test Procedure (WLTP) range refers to the estimated driving distance of an EV on a single charge, determined through a standardized laboratory test

"The battery self-heating system does a pretty good job keeping it warm in Alaskan winters, and if the battery is extremely cold, I'll first need to let it warm up before charging."
- David N., Alaska, Physics professor, and EV owner



Are EVs difficult to maintain or fix?

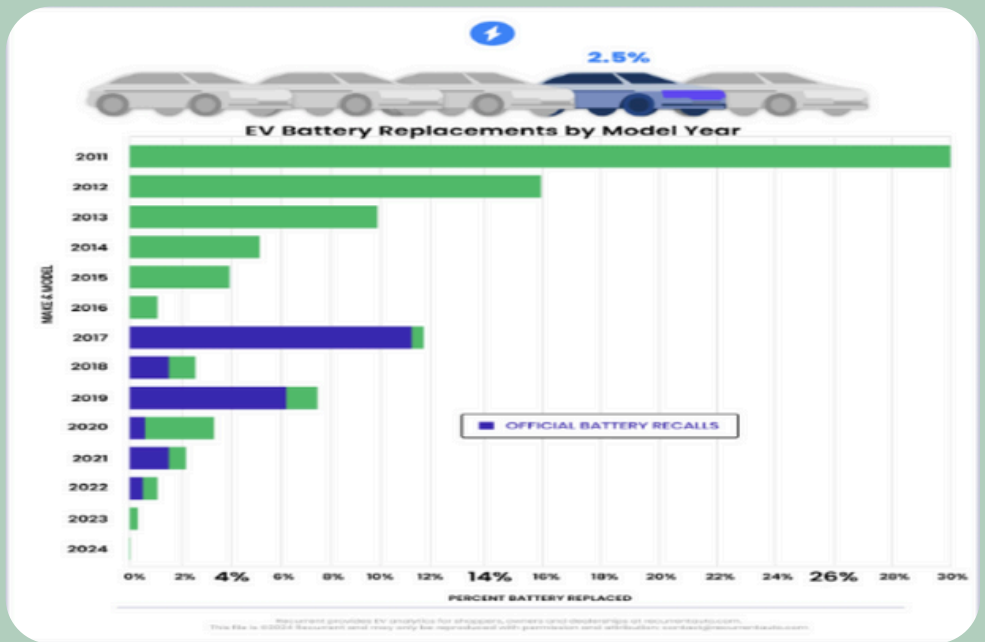
Actually, they are often easier

- Forget about oil changes, spark plugs, and timing belts, **EVs require far less maintenance than gas vehicles**
- Most EVs come with **8-year or 100,000-mile battery warranties.** Even after **120,000 miles, most EV batteries still retain 80%** or more of their original power
- Routine things like brakes, tires, and inspections can usually be done at the **same repair shops drivers already use** — and **more mechanics** are now **EV-certified every year.** Some problems can even be **fixed remotely through software updates**, without a trip to the shop at all

Sources: US DOE, EV Benefit and Considerations

Fun Fact: EV heaters start working right away — even on cold mornings. No more waiting for the engine to warm up like in a gas car

Source: Recurrent Auto's How Long Do Electric Car Batteries Last?



EVs are safer than gas-powered vehicles when it comes to fire risk

Vehicle Type	Fires per 100,000 Vehicles Sold in the US
Gas Vehicles	1,530
Hybrids	3,475
Battery-Electric Vehicles	25

Source: Plug In America, 2022

"People don't panic when a gas car catches fire — it's seen as normal. But EV fires get big headlines, even though they happen way less." - Dr. Paul Kohl, Professor of Chemical Engineering, Georgia Tech's School of Chemical and Biomolecular Engineering

EVs are designed with layers of built-in safety: battery packs are sealed and reinforced, and cooling systems and automatic shutoffs kick in if there's a crash. In rare cases where fires do happen, it's usually from a serious accident or water damage, the kind of extreme scenario that can affect any car

It's a reminder that unfamiliar risks feel scarier, even if they're less likely to happen

What you can do next

If you're still unsure, these small steps can help you get real answers:

1. **Test drive an EV in winter**
   → Feel how it handles the terrain and ask how drivers deal with snow and cold
1. **Ask your local mechanic if they work on EVs**
   → Many already do — and more are getting trained every year
1. **Look up how your preferred model performs in winter**
   → Some EVs lose less range than others. Try Recurrent Auto's winter EV range

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