How to increase an EV's driving range

Know the tricks to go further.

Driving range uncertainty is one of the biggest reasons why people are skeptical about making the switch to electric vehicles. But with more EV models with increasing range available in the market each day, the continuous growth of charging stations, and a few tricks that maximize EV range, you'll find range anxiety a thing of the past.

How to calculate EV range

EV range fluctuates from vehicle to vehicle since automakers produce models with varying battery capacities. The given range of an electric vehicle is ultimately an approximation that highly depends on the driving condition and your driving style.

How is standard range calculated?

Standard range is the general way an EV's starting range is calculated (before hitting the road) It is determined by:

1. Energy capacity
2. Vehicle efficiency (amount of energy consumed per mile)

Formula:
Range = energy capacity/vehicle efficiency

How is operational range calculated?

Operational range is the most current range once you're on the road. It is determined by:

1. Distance traveled
2. Amount of power used
3. Battery charge remaining

Formula:

(Distance traveled/amount of power used) x (battery charge remaining) = Distance to empty

Factors that affect your EV driving range:

- Weather and Temperature
- Speed
- Driving Style
- Road conditions

Extreme temperatures, fast acceleration, rough driving, and steep roads will decrease your EV range.

Automakers with longer range EVs

Range anxiety – or the unsettling feeling that an EV doesn't have enough range to get to a destination – stops many drivers from purchasing electric vehicles. Fortunately, more automakers are increasingly producing EVs with longer driving ranges. Below is a list of car manufacturers that produce some EV models with more than a 300-mph driving range.

1. Lucid
2. Tesla
3. Mercedes
4. Rivian
5. Ford
6. Hyundai

Tips to improve EV range

There's a lot you can do to improve the over-all performance, safety, aerodynamics, and range of either a gasoline or electric car. The same actions that stretch-out the gas milage of a regular combustion engine can also help extend the life of an EV battery. Follow these tips to improve your EV's range:

- **Keep speed in mind** – Driving at high speeds will deplete your battery faster. Be mindful of your speed to improve both safety and battery efficiency.

- **Drive gently** – Slamming down on the accelerator and jerking the wheel will drain the battery faster. Keep your driving smooth and turn on the Eco setting of your car, if it has one, to prolong battery life.

- **Maximize regenerative braking** – an EV uses the energy produced while braking to send power back to the battery. Turn on the regenerative setting of your vehicle and use this to your advantage when driving in the city.

- **Keep your tires properly inflated** – Driving your EV with below-level tire pressure will deplete its battery life faster. Keep your tires with the right amount of air to extend battery life and reduce the risks on the road as well.

- **Drive light** – The less you carry in your electric vehicle, the more efficient it will be. Get rid of unnecessary weight and clean out your trunk to increase EV range.

- **Choose the efficient route** – Avoid areas with traffic congestion or that require the use of high speeds. Your GPS or navigation system can help you find these. Choose roads that are flat instead of hilly to allow for a steady commute.

- **Warm-up and cool your EV beforehand**– Waiting until you're diving to warm-up or cool your vehicle, prompting you to run the heater and AC at full force, will reduce its battery life a lot faster. Try heating and cooling your EV while it's charging to optimize its range.

- **Avoid overcharging your EV** – Most EV batteries start discharging electricity on their own once they're fully charged - this is a common mistake done with EV charging. Disconnect the charger once your car is fully charged for better EV battery management.

Why choose an electric vehicle?

There are many benefits to driving an EV. Electric vehicles not only emit zero harmful emissions that are harmful to our environment, but they also have fewer moving parts, and thus require less maintenance. You can also save money by omitting the high costs of gasoline and by taking advantage of the many available tax incentives and rebates. As the technology of electric vehicles continues to improve, it is becoming increasingly easier and more affordable to own an electric vehicle.

(Please link to the following websites)

https://www.reliant.com/en/residential/electricity/renewable-energy/electric-vehicles/why-electric-vehicles.jsp

https://www.reliant.com/en/residential/electricity/renewable-energy/electric-vehicles/ev-rebates-and-incentives.jsp

Products and plans (promo)

Reliant has the plans to fit your EV lifestyle. Charge your EV for less, every night, with the Reliant Electric Vehicle 12 plan or the Reliant Truly free Nights plan.

Learn more about these plans

An ever-expanding network of public charging stations means that you can take your EV anywhere. Find a charging station near you.

(Please link to the following website)

https://www.reliant.com/en/residential/electricity/renewable-energy/electric-vehicles/electric-vehicle-charging-stations.jsp

EV FAQs

- **What is an EV?**

  An EV is a shortened acronym for "electric vehicle." EVs are vehicles that are either partially or fully powered on electric power. EVs use an electric motor instead of an internal combustion engine.

- **What's the difference between EVs and hybrids?**

  There are three basic types of EVs: all-electric vehicles (AEVs) plug-in hybrid electric vehicles (PHEVs) and hybrid-electric vehicles. All three are charged in part by regenerative braking, which captures kinetic energy during deceleration and stores it in the battery to power the electric motor.

- **What rebates and incentives do I qualify for if I drive an EV?**

  Depending on where you live, tax credits, rebates, vouchers, discounts on vehicle registration fees, and other special offers or exemptions are available to support the EV movement. With government EV incentives like the federal electric vehicle income tax

credit, you may even qualify for up to $7,500 back, depending on the make and model you buy.

Sources

https://www.proterra.com/understanding-range-clarity-behind-the-calculations/

https://www.carsales.com.au/editorial/details/advice-how-do-electric-vehicles-calculate-range-119044/

https://www.carwow.co.uk/electric-cars/range-calculator#gref

https://www.cars.com/articles/electric-vehicles-with-the-longest-range-422227/

https://www.myev.com/research/buyers-sellers-advice/10-ways-to-boost-your-evs-range