

# Electric vehicles

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Electric vehicles are vehicles that are fully or partly powered by an electric motor.

Electric vehicles include cars, vans and motorcycles. Collectively these vehicles are known as Ultra Low Emission Vehicles. These vehicles use electricity although a small minority use alternative fuels like hydrogen.

# Types of electric vehicles

Electric vehicles are growing in popularity ([electric vehicle figures for Northern Ireland](#)) and will help to reduce carbon emissions from transport. This will contribute to government targets towards net zero emissions. Environmentally, the manufacture and running of an electric vehicle during its lifetime leaves a much smaller carbon footprint than a petrol or diesel vehicle.

## Battery electric vehicle

A vehicle powered only by electricity. The battery is charged by an external power source and incorporates regenerative braking which helps to extend the available range.

## Plug-in hybrid electric vehicle

Retains a petrol or diesel engine, and also has a battery which is larger than a Hybrid and therefore improved electric range of up to 50 miles. It can be driven with either the petrol or diesel engine, electric motor, or both simultaneously. The battery can be recharged by an external power source.

## Hybrid (also known as a self-charging hybrid)

Has a petrol or diesel engine as the only means of propulsion and a small battery and an electric motor to boost efficiency.

## Extended range electric vehicle

A vehicle which combines a battery, electric drive motor and a small petrol or diesel generator. The electric motor always drives the wheels with the internal combustion engine acting as a generator when the battery is depleted.

# How much do electric vehicles cost?

The initial upfront purchase price of an electric vehicle tends to be higher than its petrol or diesel equivalent. However, the difference is narrowing and is expected to largely disappear. Electric vehicles also have lower running and maintenance costs.

## Where can consumers buy an electric vehicle?

Electric Vehicles, like petrol or diesel vehicles, can be purchased from most car or vehicle dealerships and can be bought second-hand.

## Grants or financial assistance available

Some types of low-emission vehicles are eligible for a grant from the government.

Eligible vehicle types are:

- wheelchair accessible vehicles
- motorcycles and mopeds
- small and large vans
- small and large trucks
- taxis

You do not apply for the grant. The seller includes it as a discount in the purchase price.

[More information on low-emission vehicles eligible for a plug-in grant](#)

Salary sacrifice - you may also benefit from an electric vehicle through a salary sacrifice scheme. This can be considered a benefit-in-kind.

[More information on salary sacrifice schemes: How can electric car drivers benefit?](#)

## Charging an electric vehicle

### Charge time / range

The amount of time it takes to charge an electric vehicle depends on the size of the battery and the speed of the charging point.

- A typical electric vehicle with a 60kWh battery takes just under nine hours to charge from empty-to-full with a 7kW charging point.
- Home charging with a 7kW charging point will add up to 30 miles of range per hour of charging.
- Drivers often top up charge rather than waiting for their battery to recharge from empty-to-full.

- For many electric vehicles, you can add up to 100 miles of range in around 35 minutes with a 50kW rapid charger. The bigger the battery and the slower the charging point, the [longer it takes to charge from empty to full](#).

The main ways to charge an electric vehicle are at home or using a public charge point. Some workplaces also provide [charge points for employees](#).

### **Charging at home**

Charging at home is the most convenient and cheapest option.

More information on charging costs is available on the [gov.uk website](#).

### **Installing a home charging point**

To charge an electric vehicle at home, it is recommended to install a home charging point which will require off street parking. A home charging point is a compact weatherproof unit that mounts to a wall with a connected charging cable or a socket for plugging in a portable charging cable.

Dedicated home charging points are installed by qualified specialist installers. It is a legal obligation to notify Northern Ireland Electricity Networks (NIE Networks) of the installation of a charge point. The installer will be required to provide capacity and testing information on the charger, so it is important to find a suitably qualified installer. NIE Networks has an [Electric Vehicle Drivers Guide to Charging at Home](#) which includes information on notifying NIE Networks of an electric vehicle charger installation.

The typical cost of a home charge point is around [£800-£1500](#). Once installed, you only pay for the electricity you use to charge.

The [electric vehicle chargepoint grant](#) provides funding of up to 75% towards the cost of installing electric vehicle charge points at domestic properties across the UK. It is subject to criteria such as living in a flat or rented residential property.

### **Your electricity bill**

If you are charging your electric vehicle at home, your electricity bills will increase. As an electric vehicle driver, it is therefore very important to shop around to make sure that you are on the right electricity tariff - check if your energy supplier has a specific electric vehicle tariff or time of use tariff available. For example, electric vehicle owners on time of use tariffs such as Economy 7 or Powershift can save money by charging the electric vehicle at night when electricity is cheaper. If you do change to a time of use tariff, make sure to check with your supplier what hours you get the cheaper rates.

The Consumer Council has an [online price comparison tool](#) that can help consumers shop around for the best electricity deals. Our tool doesn't currently compare time of use tariffs, but you can find information about these tariffs on our [price comparison tables](#) to help you find the best prices.

### Public charge points

Public charge points are located throughout Northern Ireland and are most useful for on-the-go charging or if you do not have a home charge point.

ESB currently operates the largest public charging network in Northern Ireland. [Find your nearest ESB charging point.](#)

The electric vehicle charging market is developing in Northern Ireland and other charge point operators for example include [ChargePoint](#), [EasyGo](#), [Maxol](#) and [Weev](#).

[Zapmap](#) is a useful resource which helps you locate a charge point.

The main types of public charge points are slow, fast, rapid and ultra-rapid. There are also different types of connector: Type-1, Type-2, CHAdeMO, and CCS. It is important to understand the differences between charge point types and when is best to use each type.

	Slow	Fast	Rapid	Ultra-Rapid
<b>Power rating</b>	3-6kW	7-22kW	50kW or higher	Typically either 100kW, 150kW or 350kW
<b>Electrical supply type</b>	AC	Usually AC, DC available at higher rates	DC	DC
<b>Charge time</b>	4-8 hours	2-4 hours	25-40 minutes (80% charge)	20-30 minutes (for a typical charge)
<b>Vehicle range added in 15 minutes</b>	3-6 miles	6-20 miles	35-40 miles	
<b>Connector*</b>	Type-1 Type-2	Type-1 (max 7kW) Type 2	CHAdeMO, CCS, Type-2	CCS or CHAdeMO
<b>Best use</b>	Work/home	Home/Work/on-the-go	On-the-go/long journeys	On-the-go/long journeys

	Slow	Fast	Rapid	Ultra-Rapid
<b>Electric vehicle compatibility</b>	All	All, some vehicles may charge slower than others	Dependent on the connector type. Not all battery electric vehicles and very few plug-in hybrid are capable of accepting a rapid charge.	An electric vehicle which is only able to accept a maximum of 50kW DC can still use ultra-rapid charge points. The power will be restricted according to what the vehicle can deal with.

\* Type-1 and CHAdeMO are now older standards and nearly all new cars now come with Type-2 or CCS.

[More information on electric vehicle charging from Energy Saving Trust.](#)

## Cost of electric vehicle charging compared to petrol and diesel

A [UK November 2022 report by the AA](#) found that in comparison to petrol and diesel, the price to charge an electric vehicle tends to be favourable.

- This report confirmed that home charging is the cheapest option.
- If you don't have a home charger and charge your vehicle on the public network using rapid and ultra-rapid charging, running a diesel vehicle is cheaper.
- If you don't have a home charger and charge your vehicle on the public network (with the exception of ultra-rapid), running a petrol vehicle is more expensive.
- Using a combination of home charging and the public network, running an electric vehicle is cheaper than running a petrol or diesel vehicle.

## Maintenance costs

Battery electric vehicles have fewer moving parts and therefore require less maintenance than petrol and diesel vehicles. This will reduce costs, especially as the [car gets older](#). There is a slight difference in servicing costs between similar classed battery electric vehicles and petrol vehicles; with a mid-range petrol vehicle costing between £170-£250 for dealership servicing and a mid-range battery electric vehicle costing between, [£130-£180](#).

As a plug-in hybrid electric vehicle retains a petrol or diesel engine it will have similar maintenance requirements to traditional petrol and diesel vehicles.

[HEVRA- Hybrid and Electric Vehicle Repair Alliance](#) offers advice on independent electric vehicle repair and servicing options including assistance in finding a suitable garage near you.

## **MOT**

Electric vehicles have to pass an MOT test after four years just like other cars but unlike their petrol or diesel counterparts, electric vehicles do not require an [emissions or noise test](#).

## **Tax**

Legally all cars must be taxed but not all vehicles have to pay road tax. Road tax is calculated based on the amount of CO2 your vehicle emits. Currently fully electric cars do not pay any road tax. However, this is set to change from April 2025 when electric vehicles will no longer be exempt from road tax. Plug-in hybrid electric vehicles and hybrids can pay anywhere between £0-£155 road tax per year.

### **[Vehicle Excise Duty expensive car supplement](#)**

Since April 2017, cars with a list price exceeding £40,000 pay an additional supplement (£390 April 2023 rate) as well as paying the standard rate. Zero-emission cars were exempt from the £40,000 rule but from 1 April 2025 will have to pay the supplementary rate.

## **Insurance**

Most motor insurance companies offer insurance on electric vehicles. Shop around to get the best deal.

Whilst there are no set differences between electric and petrol or diesel car insurance it is worth considering issues relevant to electric vehicle insurance.

[More information on electric car insurance](#)

## Useful contacts

Electric Vehicle Association Northern Ireland

Electric Vehicle Association Northern Ireland aims to promote electric vehicles in Northern Ireland and represent the interests of their users.

[EVANI - Electric Vehicle Association Northern Ireland](#)

Energy Saving Trust

Promotes policymaking and provides information to consumers.

- [Energy Saving Trust](#)
- 02892 449819 or 02892 449820

Northern Ireland Electricity Networks

Northern Ireland Electricity Networks (NIE Networks) owns the electricity transmission and distribution network and operates the electricity distribution network which transports electricity to over 860,000 customers.

[03457 643 643 Northern Ireland Electricity Networks](#)

Office for Zero Emission Vehicles

The Office for Zero Emission Vehicles is a team working across government to support the transition to zero-emission vehicles (ZEVs). It provides support for the take-up of plug in vehicles, as well as funding to support chargepoint infrastructure across the UK

[Office for Zero Emission Vehicles](#)

## Other transport and travel information



### **Public transport**

Advice and information about public, accessible and community transport including information about traveling with a disability or reduced mobility, and finding the best value fare.

### **Active and sustainable travel**

Advice and information on walking, cycling and multi-modal travel

### **Electricity price comparison tool**

You could save money by switching supplier, switching billing method, or switching tariff. Use our price comparison tool to make sure you are on the best deal for you.

### **Bills and metering**

Learn how to understand your electricity and gas bill, and how your meter works.