



Sustaining Dunbar

Travel Advice Factsheet 15 - Electric Cars

There are times when the car is the only realistic option for a journey, but you can still keep your carbon footprint to a minimum by using eco-driving techniques or arranging a car share. When replacing your car, consider greener options and buy the smallest car practicable for your circumstances. If you are considering buying an electric car, the information below should help.



Buying an Electric Car

The first stage is to have a think about what you will be using the car for:-

- What mileage will you be doing?
- What sort of driving will you be doing? In town or motorway?
- How big does your car have to be? For maximum savings, you should buy the smallest car possible. You can always hire a larger car if necessary.
- How will you be using the car? Daily or just now and again? If it is just now and again, perhaps a car club would be a better option for you. It is estimated that if you travel less than 6,000 miles a year, joining a car club could save you £3,500 each year. Dunbar has its own car club, visit www.sparewheels.org.uk for more information.
- Where do you live? If you live in a flat or an area where on street parking is a problem, it may not be possible for you to charge your car at home.
- Electric cars are at their best where most of the driving is around town or in urban areas. Drive them fast on a motorway and the range quickly drops. If you normally drive less than 75 miles a day, an electric car will suit you no matter what sort of driving you do. If you regularly drive further, they probably will not be suitable for you right now, but it might be worth considering a hybrid car which would give you the back up of a petrol engine.
- Over 60% of households in the UK have more than one car. Electric cars are ideal in this scenario: use the battery powered car for all the shorter journeys and the other car for longer distance driving.

Hybrid Cars

If you need a family saloon, or regularly travel more than 75 miles/day, it might be worth considering a hybrid car such as a Toyota Prius or a Vauxhall Ampera which have both a petrol engine and an electric motor, reducing emissions by between 25 and 50%.

Charging Electric Cars

Generally, most electric vehicles can be charged from a standard electric socket, so most people charge them at home overnight or at work if possible. There is a (slowly) growing network of public and private charging points. A full charge from a domestic socket typically takes between 5 and 10 hours. Many electric cars can provide an 80% charge in around 2-2½ hours from a domestic socket. Rapid charging points will enable an 80% charge in 30-45 minutes.



There is no definitive list of charging points in the UK. www.chargeyourcar.org.uk seems to list most of them. There are also various apps that claim to do this.

Range

Most battery powered cars currently available have a range of between 70 and 120 miles. You can maximise range by using eco-driving techniques and keeping your air conditioning and heating off. Unfortunately, batteries are not as efficient in colder weather, reducing the range by around 20-25%. The good news is that battery technology is improving all the time.

If you need to travel longer distances regularly, then a hybrid might be the solution for you. If you only make long journeys now and again, then a combination of electric car and membership of SpareWheels, Dunbar's local car club which would give you access to a conventional car when you need it, may be worth considering. Of course, a cheaper alternative to making regular short journeys in the car would be to walk or cycle more often, or try to organise appointments so that you can do them all on the same day.

Costs

The running costs of electric cars make them a very attractive option; it has been estimated that the cost per mile for an electric car is around 4p, whereas it is 17p for a petrol car. Electric cars are exempt from road tax, and although more expensive to buy than conventional cars, the government's Plug-In Car Grant of up to £5000 brings the price down to a more affordable level

Performance

An electric car runs on a rechargeable electric battery that you can plug in either at home or at a recharging point. An electric motor is used to convert the battery power into mechanical power which is then used to power the drive train of the vehicle propelling it forwards or backwards. Electric cars have instant acceleration and there are no gears to change. They also use regenerative braking; as the car uses its brakes the power generated by the friction of braking is transferred to the battery, making electric cars very efficient driving around cities. Electric cars have fewer components, but still need servicing regularly and an MOT is still required.

Environmental Considerations

Currently, electric cars have a carbon footprint of less than 70g CO₂ per km, hybrids around 110g/km and an average new petrol car 200g/km. An electric car is only as green as the energy it consumes, but as the percentage of our electricity produced by renewable sources increases, and as more recycled materials are used in the manufacture of cars, then the more sustainable they become.

Using the Car Less

The best way to reduce CO₂ from travel is to use your car as little as possible, especially for shorter journeys. Almost half of the car journeys in the UK are less than five miles, the minimum distance needed to get your catalytic convertor working. The conventional combustion engine is only 20% efficient and cold engines are less so, using nearly twice as much fuel, so think about walking or cycling for short journeys instead. This will save you money, improve your health and is a far more sociable option for journeys like the school run, giving you time to chat and spend some fun time with the kids.

Taking the bus or train whenever possible for longer journeys could also save you money, time (it's much quicker to take the train to central Edinburgh than drive) and give you time to relax or work as you travel. We can give you all the information you'll need to make the most of local buses and trains, with up-to-date timetables and fact sheets to help you.

Another way to reduce your driving is to plan your activities. Make a list and buy all the groceries you'll need for the week in just one shopping trip and perhaps take your rubbish to the recycling centre at the same time. Arrange appointments so that you visit the dentist, optician and hairdresser at the same time. Internet shopping is another option to consider, and think about working from home whenever possible.