Electric vehicles

Electric vehicle technology is an ever-developing field, so always makes sure you do the appropriate research. At the time of writing, essentially there are four different types of electric vehicle:

Regenerative: These rely on batteries to power the vehicle and use the motion of the vehicle to generate the power to keep the batteries sufficiently charged for the vehicle to be used.

Electric plug-in: These may include regenerative technology but also have the facility to charge the batteries via a charging plug.

Hydrogen fuel cell (FCEV): These rely on burning hydrogen to power the vehicle, emitting water as the by-product.

Hybrids: Alongside the electric motor drive, these include an internal combustion engine (ICE) to work in union with the battery to power the vehicle. Extended range electric vehicles (E-REV/REX) use a smaller ICE to charge the battery which powers the vehicles. Certain hybrids may also include an electric plug-in facility (PHEV).

Advantages:

Alongside the associated significant low emissions, there are other good reasons to consider electric vehicles.

For information on charging points and public charging location apps/maps:
www.pluginsuffolk.org
www.zap-map.com
www.openchargemap.org

Low Running Costs:

Essentially the cost to "fill-up" an electric vehicle relates to the vehicle's battery capacity in kWh multiplied by the cost of electricity per kWh. Mpg running costs effectively relate to the number of miles a vehicle can be driven on the stored power before a recharge is required – this is where things begin to get complex. There are a number of good on-line estimating tools that can help (like those listed below along with others not shown). Like a fossil fuel car, the harder the vehicle is driven; accelerating, braking, cornering, transported weighted, etc… the more fuel is going to be consumed.

Early Adopter Financial incentives:

There are various UK Government incentives to encourage the transition from fossil fuel vehicles to efficient electric alternatives, not only in terms of buying and ownership and installing charging points but also specific to businesses:

- Reduced employer National Insurance contributions (alongside lower company car tax for employees)
- Capital Allowance incentive allowing the total purchase cost to be offset against taxable profits in the first year.
- No fuel duty payable on associated electricity

Disadvantages:

Range: The fear of running out of power is generally seen as the biggest concern. As mentioned, "hard driving" is bad news for any vehicle. That said, the issues of charger point accessibility and thus journey length is a genuine concern. Or should it be? Electric vehicle technology is improving apace, with standards established to give real world driving data, under the Worldwide Harmonised Light Vehicle Test Procedure to allay these concerns.

For further support and details of any opportunities for grant funding please contact a Carbon Charter advisor.