## Refuelling an electric car

One of the things that makers of electric cars need to improve to encourage more potential buyers of them is their range and how easy it is to refuel them. Because the battery needs so much power to recharge it can typically take 12 hours to recharge a near flat battery from a domestic mains supply. It means some use electric cars as short distance transport to and from home so they can rely on the long overnight charge.

If they wish to travel longer distances owners need to plan ahead to see where there are fast chargers available, or whether there are overnight facilities where they are going that would allow the usual long overnight charge. Some of the charge points now available do not have the right connectors for every type of electric car. Tesla has their own network. Apparently you can face the need to download an app, supply a lot of data and enter into a supply contract with monthly sums if you wish to recharge at some charge points. This is more intrusive and complex than simply buying a few litres of fuel for card or cash.

Gradually more charge points will be installed, and possibly more will accept the range of vehicles and charger links they have on them. There is then the issue of how long it takes to put enough charge in to the vehicle to continue your journey. I can refuel my vehicle in five minutes to give another 450 miles range from anyone of around 20,000 filling stations. This is convenient. Even with a fast charger you will not get anything like 450 miles of range for 5 minutes at the filling station.

There is also the issue of effective range. The electric car will give you an estimate of how far you can travel before a new charge. This may prove optimistic. If you get into heavy traffic, if it starts to rain and you need wipers, if you need the heater or if the light wanes and you need lights, your effective range can contract visibly.