10/1/11

- Autogas has higher octane number & produces 20% less CO₂ per mile than petrol/ •
- Releases less CO higher ratio C:H •
- Fewer un-burnt hydrocarbons & NO_x than petrol
- Road tax is less for user •
- LPG filling stations still relatively rare •
- Liquid Natural Gas (LNG) mainly methane and comes from oil and natural gas fields •
- Methane cannot be liquid by pressure alone, it has to be cooled below -160°C. •
- LNG most suitable for larger vehicles in modified diesel engines •
- High C:H ratio so less CO & NO_x ٠
- **Biofuels** 0
 - Ethanol added to petrol •
 - From fermenting cane sugar juice
 - Produces less CO, SO₂ & NO_x
 - Large amount of energy & land needed to grow crop •
 - Queries about overall energy efficiency.
- Biodiesel Ο
 - Ordinary engines can use •
 - Fuel made from vegetable oil or animal fat •
 - Made through transesterification •
 - Converts veg oil/animal fat into esterified oil can be used as diese or in ded with diesel. en? Water is plentiful source of hydrosel Oktracted Hydrogen can bestor to Lots less envisions ٠
- Hydrogen?

 - gerous

Can be used in internal combustion engine

- How generate energy needed for hydrolysis?
 - burning fossil fuels - no point - no problems solved
 - Biofuels not worth it
 - Nuclear – high risk
 - 'alternative energy' windmills, solar thermal energy, wave, HEP etc. must all be exploited as much as possible.
- Piping hydrogen cheaper than transmitting electricity (way more dangerous)
- Hydrogen fuel cells in new cars storage of hydrogen large volume needed to get millage equivalent to petrol/diesel.