What will happen to vehicles without fossil fuels?

The world is a big place. If we went everywhere on foot, then most of your holiday in Rome would be getting there, and then you would have to walk all the way back again. It would take days, even weeks to get anywhere different. So we have invented transport.

First it was horse and carriage, which was slow and tiring, and then came a big change. Along came the car, with a combustion engine. This was faster and easier to drive than a horse and carriage. The car kept developing and getting better and better each time. Cars then started getting roofs, then windows. They became faster and more dangerous. The car was becoming cheaper and more common. To cope with the dangerous speeds the government and the manufacturers introduced seatbelts, then crumple zones, and then airbags, until we end up at today’s car.

Cars burn fossil fuels. Fossil fuels are the remains of prehistoric plants and animals that have been compressed over millions of years.

The problem with burning fossil fuels is that they release greenhouse gases which get trapped in the atmosphere. These greenhouse gases absorb and re-emit radiation from the sun which heats up the world (see diagram below).
If we carry on burning fossil fuels the polar ice caps will melt, resulting in a rise in sea levels (only land based ice will cause sea levels to rise). This rise could cause areas across the world to flood. The rise in temperature however would cause innocent species to die out because they would not be able to cope with the extra heat. Climate change will destroy the world if we don’t act now. 20% of all greenhouse gases come from transport (1), so one way to help would be to start producing environmentally friendly vehicles in an environmentally friendly way.
It is estimated that oil production will peak in 2010 (see graph above). This is because oil is running out and becoming harder and harder to find. We will have to use alternative energy sources, like solar or wind power electricity. We need to encourage industries to do this. If we do not invest in environmentally friendly energy, fossil fuels will run out before their demand decreases. This may then result in an energy crisis where people would not have power to their homes.

Some manufactures are trying to invent and sell environmentally friendly vehicles without alienating their customers. The manufacturers want green cars that look and feel like normal ones, but the problem is, the car has to change to be completely environmentally friendly. Below are a few clever ideas that do not really work.

The Toyota Prius. “It’s environmentally friendly, isn’t it?”, I hear you say. Well, no, not exactly. Yes it has an electric motor that does not pollute at all, and is recharged through a regenerative braking system. However, the battery will not take you more than seven slow miles (2), and the engine cuts in anyway if you accelerate quickly or drive at a reasonable speed. Then you have to use the 1.5 litre petrol engine which is not all that efficient. There is an article on the Times Online (3) in which they drive to Geneva in a Prius and BMW 5 series. Overall the BMW was better. It did 2.2 mpg more than the Prius.

The Lexus RX450h (‘h’ stands for hybrid) is the same as the Toyota Prius but worse, because it also has a 295bhp, 3.5 litre V6 (4) gas guzzling engine. Yes it’s a hybrid, but as before you would be more environmentally friendly driving a basic BMW 5 series.

Start/Stop technology is another attempt at making environmentally friendly fuel engines. For example, Land Rover wants to make a 2.2 litre diesel 4x4 Freelander more environmentally friendly. Why? Why use a more efficient fuel engine, instead of developing a completely green electric one?

Alfa Romeo and Fiat’s MultiAir technology is an ingenious variable valve timing engine that uses a hydraulic system to open and close the valves. Yes, it’s better than a standard fuel engine, but again, it emits greenhouse gases that heat up the world.

Car manufacturers should be spending less time developing start/stop technology, hybrids, diesels, and variable valve timing engines, and start developing hydrogen fuel cell and electric vehicles. There is no
point making the fuel engine more efficient. Manufacturers must stop thinking fossil fuels. It’s the end of an era. It’s the end of fossil fuel powered transport. The future is hydrogen fuel cells and electric vehicles.

Some manufacturers on the other hand, have already developed their non fossil fuel vehicles. Take the Lightning GTS (5) for example. It’s fully electric so doesn’t pollute at all, but still has over 500 bhp. That’s more than 120 bhp more than a V8 petrol Jaguar XK. In fact the Lightning is even quicker 0-60mph than the XK, with a time of less than 5 seconds. However, the Lightning GTS is a lot more environmentally friendly than a Toyota Prius.

The Lightning even has a regenerative braking system that charges the battery back up when the car slows down. The biggest worry with an electric car is always the range, but the Lightning has conquered that too because it has a range of just over 185 miles (300 km). 185 miles is not quite as far as a normal car can last, but it is a lot further than other electric cars and is enough to be able to get to most places without having to stop for a recharge. But if you do have to stop, the Lightning can be recharged within just 10 minutes.

An alternative to a purely electric vehicle is a hydrogen fuel cell vehicle. Hydrogen fuel cells combine hydrogen (from a fuel tank) and oxygen (from the air) to create electricity. This is more similar to a normal car than an electric vehicle because you do not have to charge it up. You just refill it with hydrogen at a fuel station. There are not many hydrogen fuel cells around at the moment but they will develop and become a popular form of alternative transport like electric vehicles. Honda already sells a hydrogen fuel cell car called the FCX Clarity. The FCX Clarity is an affordable, practical car that seats four adults, and is generally a good car.

Other interesting developments in the green car world include the Bee Four electric racing vehicle which is capable of 700 bhp (6), Ecotricity’s Greenbird which holds the world record for the fastest wind powered vehicle (126.2mph) (7), and Renault’s new Z.E. (Zero Emissions) range due to arrive in 2012. The Z.E. range of vehicles will all be electric with a range of 100 miles on most models (8). Renault will also offer battery replacement service stations that switch empty batteries for fully
What will happen to vehicles without fossil fuels? Well, the main changes will happen under the bonnet, but electric cars will be treated differently from fuel cars. The electric motor is a lot simpler than a combustion engine, so it will need less maintenance and probably last longer. There will also be a change in the way cars are built. They will have to be built using more environmentally friendly materials and materials that are robust so you do not have to keep replacing old parts with new ones. We need to push car manufacturers into producing green cars, but once they start they will never turn back. You can’t predict the future, but one thing is for certain; it’s green.

**SOURCES**

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