



BRIGHTON PEACE & ENVIRONMENT CENTRE

MOTOR VEHICLES

Although the environmental utopia of free & efficient mass transit for all may be an ultimate aim, for many the daily grind involves the necessity of 'conventional' transport – cars, motorbikes, lorries. Clothes and food are often delivered by lorries; school-children arrive by bus or family car; millions of us travel to work in private cars. So if other alternatives aren't always possible, how can we make transport more environmentally friendly? A revolution in motor vehicle technology is underway... and consumers voting with their feet certainly grab the attention of major vehicle manufacturers.

See also our 'Transport Fuels' and 'Cycling, Public Transport and Aviation' factsheets.

Motor Vehicles

Air quality pollutants, such as carbon monoxide and NOx have been greatly reduced since the 1970s due to EU Directives, but emissions of CO₂ have risen over the same period. One reason for this rise is that the weights of cars have increased by about 40%. A 10% increase in weight of car produces an approximate 10% increase in CO₂.

Reducing Car Use

- Walk or cycle where possible. For longer journeys use public transport (see our 'Cycling, Public Transport and Aviation' factsheet')
- Carshare - www.nationalcarshare.co.uk, www.catcharide.co.uk, and www.carplus.org.uk. If you have 4 people in a car, commuting can be as low carbon as going by bus. For sharing the school-run visit www.school-run.org or contact your child's school governors or PTA and ask them to look into a scheme
- Join a carclub - www.citycarclub.co.uk, www.whizzgo.co.uk, or www.streetcar.co.uk

Some Tips for Greener Car Travel

Before you travel:

- Avoid short car journeys and rush hour traffic
- Check the traffic news and try to avoid overcrowded routes
- Remove roof racks and don't carry heavy objects in the boot; the heavier your car, the less fuel efficient it becomes
- Regularly check the tyre pressures

When driving:

- Drive smoothly and efficiently, slowly and in higher gears
- Driving at 50 mph instead of 70 mph can reduce fuel consumption by 30% and sticking to 70 mph on motorways saves 1 litre of fuel for every 20 miles driven
- Switch off the engine when you have to wait for more than 30 seconds
- Switch off unnecessary electrical devices and air conditioning (use the air vents instead) as they increase fuel consumption
- Open windows also add to fuel consumption



Photo courtesy of Nam Nguyen

Buying a New Car

- Look for a small fuel-efficient car
- More environmentally-friendly cars qualify for reduced Vehicle Excise Duty and lower Company Car Tax

- To find the carbon ranking for every class of car, visit www.dft.gov.uk/ActOnCO2
- The **Vehicle Certification Agency** provides information on cars, fuel efficiency and CO₂ emissions. To order a copy of their booklet, visit www.vca.gov.uk

The Most Unethical Car Manufacturers

Ford, General Motors and **Daimler Chrysler** have the worst ethical records. They have made large political donations to George Bush's government and are also members of the Global Climate Coalition which have been lobbying the US Government. **Suzuki** and **Daewoo** have been associated with the Burmese military junta condemned by the UN.

Hybrid Cars

Hybrid cars run on both petrol/diesel and electricity. They have reduced fuel consumption and CO₂ emissions with some reduction in emissions of local pollutants. However, the fuel consumption is not necessarily less than that of a small, efficient, petrol-driven car such as the **Toyota Yaris**. Hybrid cars charge their own batteries when braking and when the petrol-powered part of the engine is being used at high speeds.

Hybrid cars available in the UK are: **Toyota Prius, Honda Civic IMA, Lexus GS-450h, Lexus RX-400h, and Lexus LS-600h**. Visit www.greencarsite.co.uk/hybrid-cars.htm.

Electric Cars

Electric cars are only as green as the electricity used to power them. If you have a renewable energy supplier they are virtually CO₂ emissions free. City dwellers are the only suitable buyers for the current crop of electric cars, but the choice is improving. You will need your own garage or drive to plug it into the mains - but **Elektromotive** are planning to install 250 recharging posts in Brighton and Hove.

Electric cars available in the UK are: **G-Wiz, Sakura Maranello4, NICE Mega City, Nice Ze-O MPV, Elettrica, Fiat e500, Nice MyCar, Quiet Car 1, Quiet Car 2, GEM e2, GEM e4 and Micro-Vett Ydea** - www.greencarsite.co.uk/electric-vehicles-cars.htm. **Mitsubishi's i-MiEV**, a saloon car with a top speed of 87mph, will be available initially for leasing from mid 2009.

Liquid Petroleum Gas (LPG) Cars

With an LPG vehicle, considerable savings can be made; many are exempt from congestion charges. As an alternative vehicle fuel in the UK, LPG is one of most viable options. Vehicles are bi-fuel (LPG or petrol) and a simple switch chooses which fuel is to be used. You can either convert an existing petrol engined vehicle or buy new. Several car makers including **Citroen, Ford, Vauxhall, Renault** and **Saab** have LPG vehicles and **The Energy Saving Trust** has a register of approved fitters for converting

your car to run on LPG, as well as a refuelling map - www.est.org.uk. For local LPG refuelling stations see our 'Transport Fuels' factsheet.

Biodiesel or Pure Plant-Oil (PPO)

For cars that run on biofuels visit www.greencarsite.co.uk/BioFuel-cars.htm. **Blooming Futures** convert engines to run on PPO. Around 70% of diesel engines can be converted and a secondary warranty is offered. It costs, on average, about £1,500. They can put you in touch with suppliers who deliver bulk amounts of biodiesel - www.bloomingfutures.com or Tel: 01273 462197 (office) 01273 462506 (workshop). For biodiesel refuelling stations see our 'Transport Fuels' factsheet.

Motorbikes & Mopeds

- Motorbikes emit less CO₂ than cars and a modern moped emits even less than a train. However, they emit more poisonous gases and particulates than cars
- Electric mopeds are very energy efficient and don't emit any noxious fumes, but they usually only go at 30 mph and have to be recharged about every 30 miles
- **Nice** sell electric bikes and scooters - www.nicecarcompany.co.uk. The Vectrix electric maxi-scooter has a range of up to 70 miles and a top speed of 62 mph
- There is also the UK's first fuel-cell motorbike which can reach speeds of 50 mph - www.envbike.com

What you can do right now.....

Commit to walking for short journeys to the shops - it's the easiest and cheapest form of exercise there is!

Resources & Further Information

'Energy at the Crossroads', Vaclav Snil, 2003

'N₂O Release from Agro-biofuel Productions Negates Global Warming Reduction by Replacing Fossil Fuels', Crutzen et al, 2007

'The Guide to Low Carbon Lifestyles' Mukti Mitchell, 2007

'The Hot Topic: how to tackle global warming and still keep the lights on' by Gabrielle Walker and Sir David King, Bloomsbury, 2008

Royal Society of Chemistry Conference: 'Future Energy: Chemical Solutions' www.rsc.org/Energy07

'The Rough Guide to Ethical Living' by Duncan Clark, Penguin Books Ltd, 2006

'Transport: the way to go', Friends of the Earth, 2005