WHAT GOES AROUND COMES AROUND

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THE TRANSPORT EDITION

AUSTRALIA'S OIL HABIT

Australians are amongst the world's highest users of oil. Australia's total emissions are larger than those of major European economies such as France and Italy, which each have around three times Australia's population. Our excessive oil consumption results in high levels of greenhouse gas emissions, air pollutants and progressively unhealthy lifestyles. While there are many environmental and social motivations for councils to reduce oil consumption, the final clincher may be the price of oil.

According to International Oil experts, the rate at which oil deposits are being discovered has been dropping markedly in recent decades. Coupled with the growing political tensions between high oil *consuming* countries and main oil *producing* countries, these factors are steadily increasing the price of oil. If Australian oil prices continue to increase at the current rate it has been predicted that oil could cost up to three dollars per litre in a couple of years. This would mean the weekly cost of running a medium car (like a Camry) would rise to $299 per week. This would have profound economic impacts on councils operating a large fleet of vehicles.

Organisations making serious attempts to reduce their greenhouse and pollution emissions and petrol costs are taking the following steps:

- Encouraging their employees to use public transport or bicycles through provision of transport tickets and incentive schemes.
- Purchasing the most environmentally friendly cars available on the market.
- Purchasing smaller vehicles wherever possible.
- Ensuring cars are well maintained and that drivers are aware of good driving habits that reduce fuel wastage.

VICTORIAN COUNCILS GOING HYBRID

Hybrid-electric vehicles (HEVs) use half the fuel of a conventional car, emit half the greenhouse gases and create up to 80% less pollution of an equivalent petrol car. The hybrid-electric system never needs to be plugged in because it charges its own batteries during travel. Hybrids operate on electric battery power in low speeds and at full acceleration (no emissions, no pollution). During normal travelling the fuel engine is used. When the car stops the engine shuts off and does not emit exhaust.

Banyule, Casey, Darebin, Frankston, Port Phillip, Manningham and Melbourne City councils are just some of the ECO-Buy members who have purchased hybrid vehicles. When Manningham City Council decided to purchase a Honda Civic Hybrid (its second hybrid vehicle) their fleet manager completed a comprehensive life-cycle costing. While it was found that the net cost for the hybrid was higher, this vehicle would reduce the council's greenhouse emissions by at least 1000 kg annually (compared with a conventional 4 cylinder car). By making the purchasing commitment to spend more on the Hybrid vehicle Manningham has demonstrated a strong commitment to the environment by reducing greenhouse emissions and pollution. This commitment also increases demand for these vehicles which sends a message to government and industry that the market wants vehicle with reduced oil dependence. The two hybrid vehicles currently available in Australia are the Toyota Prius and Honda Civic Hybrid.

Toyota Prius vs Honda Civic Hybrid

http://www.greencarclub.org/

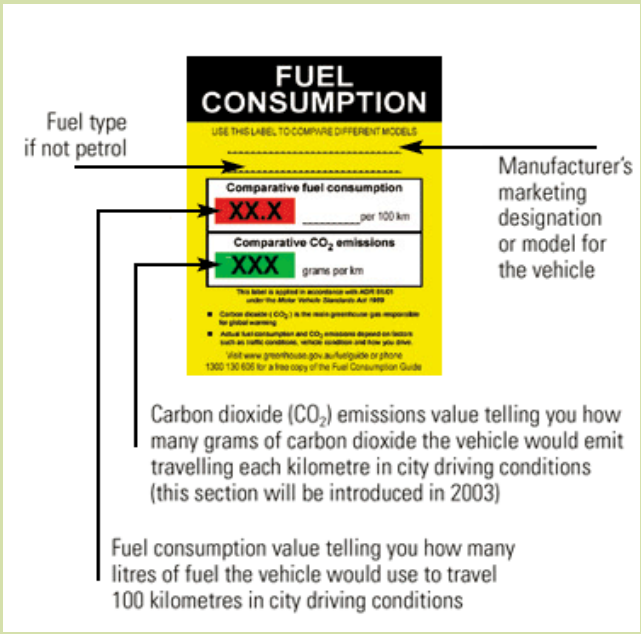
THE GREEN VEHICLE GUIDE

The Green Vehicle Guide (GVG) is an online interactive tool that provides information about the environmental performance of new light vehicles (up to 3.5 tonnes gross vehicle mass) sold in Australia. The GVG can help users choose a cleaner car.

The site allows users to enter individual vehicle details into the calculator including; model, make, variant name, engine and transmission, body style, seating and fuel type. It therefore allows users to compare level of emissions and environmental impacts from a range of vehicles. Impacts measured include:

- Greenhouse rating (based on carbon dioxide emissions) to help compare vehicle impact on climate change and the greenhouse effect.
- Air pollution Rating (based primarily on emission standards) to compare vehicle contributions to urban air pollution.
- An Overall 'Star' Rating to identify vehicles with fewer overall emissions.
- Fuel Consumption (in L/100km) to help identify the most fuel efficient vehicle for your needs.

The GVG calculator can be used in conjunction with the fuel consumption label that is on the windscreen of all new passenger vehicle, four wheel drives and light commercial vehicles sold in Australia. The label identifies how many litres of fuel the vehicle uses to travel 100 kilometres (in city driving conditions) and identifies carbon dioxide emissions.



The fuel consumption label on an LPG vehicle will show lower carbon dioxide emissions per litre than petrol vehicle. However a vehicle using LPG will have a higher fuel consumption than the same vehicle using petrol. This is due to different fuel densities between LPG and petrol. For example a vehicle using LPG with a city cycle fuel consumption of 15 L/100 km may have a city cycle fuel consumption of 12L/100 km when using petrol.

The greenhouse gas emissions for the LPG vehicle travelling 15,000 km annually, will be 3,375 kg compared to 4,140 kg of emissions when the vehicle uses petrol. 765 kg less greenhouse gases are being emitted each year from the vehicle using LPG, which is a better outcome for our environment.

Further information Australian Greenhouse Office website.

GREEN WHEELS AT DAREBIN

In the last few years Darebin City Council has made some inspirational changes to the type of vehicles they are purchasing. They have also purchased transport cards, and bikes to encourage staff to travel more sustainably.

- Out of a fleet of 97 passenger vehicles, 37 of the vehicles are four cylinder; seven are LPG gas (includes five dual fuel); and there is one hybrid Toyota Prius. The basic car model for pooled vehicle is now a four cylinder Camry and Darebin no longer has any eight cylinder passenger vehicles in the fleet.
- In 2002 Darebin purchased four mountain bikes for staff to travel between council offices and the depot and to metro meetings. This is particularly useful for staff members who don't have car licences and wish to travel to city meetings by bike.
- As part of the Northern Alliance for Greenhouse Action (NAGA) Darebin is looking at the potential to purchase a biodiesel fuel blend for heavy vehicles.
- Council purchases a regular supply of two hour and one day Metcards for staff business travel. In the last 12 months 530 Metcards have been used by staff for business travel, considerably reducing car trips and greenhouse emissions.
- Darebin plan to run a "Green Travel Competition" providing RACV donated tyre pressure gauges as rewards to staff who pledge to use less fuel over the holidays (see how pumping up tyres reduces fuel on the next page)

For further information on Travelsmart Initiatives at Darebin City Council contact Kate Myers– the Darebin Sustainable Transport Officer **KMYERS@darebin.vic.gov.au**

GREEN MAINTENANCE PRODUCTS

A range of recycled, greenhouse friendly, water saving and non-toxic fleet management products are available through ECO-Buy listed suppliers. To view the full range and supplier contact details go to '**Fleet management**' on the ECO-Find database.

Friendly Fuels:

The Australian Greenhouse Office provides the greenhouse friendly certification to manufacturers and service providers whose greenhouse emissions have been offset by emission reduction activities or low pollution emission fuels. Current certified products and services are BP Ultimate 98 and BP Global Choice Commercial Fuels.

Low-toxicity Degreasers and Coolants

Trichloroethylene (TCE) is a widely used degreaser solvent now listed as a Category 2 Carcinogen. Water-based alkaline degreasers are better for human health and the environment, particularly if used with separating agents to allow easy collection of the oil or grease.
Envirosmart industries makes a PH neutral water-based degreaser with a biodegradable surfactant .

Propylene glycol based coolants are less toxic than those manufactured from the more common ethylene glycol. Fleetguard make a low silicate propylene based coolant / antifreeze. They also produce a range of air, fuel and lube filtration systems for use in the workshop.

Mechanics Vehicle Creepers

Wharington International's ErgoCreeper™ is made from Recopol™ a recycled engineering grade resin recycled from home and office appliance casings and industrial excess that normally goes to landfill. The creeper has interchangeable and replaceable castor wheels.

Re-refined (reused) Lubricants

Enviro Oil produces a range of double refined lubricants for commercial vehicles and diesel engines. These high quality products utilise waste oil thus reducing the importation of crude oil and pollution resulting from disposal.

Recycled wipers,absorbents and spill containment:

The Smith Family make auto wiper cloths using off-cuts from the local garment making industry. This material would otherwise go to landfill.

Envirosmart industries make a range of non-toxic absorbent and spill containment products from recycled agricultural cellulose. These quickly absorb a wide variety of liquids including petroleum, oils, fuels, solvents, cooking oils, sewage, protein and other messy liquids that could pollute or contaminate the environment and work area.

Fuel Combustion Air Systems

Hiclone is a small device which fits inside the air filter housing of a carburettor or in the air induction hose on EFI, turbo, LPG or diesel engines. Hiclone optimises the air intake flow thus improving fuel-air mixing for near-complete combustion. Users report a 10 –20% gain in fuel efficiency. The device has the added advantage of reducing engine noise, extending engine life and reducing exhaust pollution. Especially beneficial for diesel engines.

Microfibre Auto Mit

Microfibre is an ultra fine polyester woven fabric capable of achieving a high level of shine without chemical cleaning products or buffing tools. The mit reduces water usage and prevents unnecessary cleaning chemicals entering our waterways. Microfibre Auto mits are available through Healthy Dwelling.

FUELS OF THE FUTURE

Biodiesel is a liquid fuel produced from new or used vegetable oils. It can be mixed with conventional diesel or used alone in traditional diesel engines or in diesel hybrid vehicles. Its energy content is similar to conventional diesel but reduces carbon dioxide emissions by 78%; sulphur oxide by 100%; particulate emissions by 30—50%; carbon monoxide by 50% and ozone-forming and toxic hydrocarbons by 50-70% respectively. It also has a higher flashpoint making it a safer fuel option. American **Vegievan Biodiesel bus** pictured below left

Similarly **Ethanol** is a renewable fuel made from fermented corn, reducing carbon dioxide emissions by 20 –30% but has the unfortunate side effect of high levels of sulphur emission and high energy consumption in production. Ethanol has the advantage of being able to be used in conventional engines. A **Ventura** ethanol bus operating in Victoria is pictured above right.

Currently biodiesel and ethanol are expensive to produce requiring high agricultural inputs to produce the plant source. However, as the price of conventional diesel and petrol steadily climb, these fuels are fast becoming a cost competitive and commercially viable option.

Despite the recent federal government biodiesel excise of 38%, which has driven many potential manufacturers out of the market, there are still hundreds of small manufacturers producing biodiesel. It is anticipated that biodiesel will become commercially available in 2005, with local government being a key target market for manufacturers. Contact the **Alternative Fuels and Energy (AFE)** for inquiries about supply chain and future opportunities to switch fleet vehicles to biodiesel.

While natural gas and LPG represent an environmentally friendly alternative to petrol, these fuels are still non-renewable and may be subject to future resource constraints and price increases. Hydrogen gas can be produced using natural gas or water but still requires an energy supply for the conversion process. Electric vehicles can be powered with renewable energy, however if run on a coal produced energy this is still non-renewable and polluting at the source.

10 TIPS FOR REDUCING FUEL

1. Minimise your vehicle use

Plan a number of errands in one trip rather than taking several trips, and save both time and fuel. Avoid short vehicle trips and peak-hour traffic whenever possible.

2. Drive in high gear

Engines run most efficiently between 1,500 and 2,500 rpm (lower in diesels). To maintain these low revs you should change up through the gears as soon as practical and before the revs reach 2,500 rpm.

3. Drive smoothly - avoid unnecessary acceleration

Drive at a good distance from the car in front so you can anticipate and travel with the flow of traffic. This avoids unnecessary acceleration and frequent repetitive braking.

4. Minimise fuel wasted in idling

Stop the engine when your car is stopped or held up for an extended period of time. Switching engine off, even for a short period, will save more fuel than is lost from the burst of fuel involved in restarting the engine. Net increased wear and tear from restarting is negligible.

5. Speed kills economy

High speeds = high fuel consumption. At 110 km/h vehicles use up to 25% more fuel than cruising at 90 km/h.

6. Minimise aerodynamic drag

Additional parts on the exterior of a vehicle (roof racks and spoilers) or open windows, increases air resistance and fuel consumption, in some cases over 20%.

7. Look after your vehicle's tyres

Inflate tyres to the highest pressure recommended and make sure wheels are properly aligned. Correct inflation will reduce fuel consumption by at least 6% and regular wheel alignment will reduce consumption by at least 10%. It will also extend tyre life & improve handling.

8. Use air conditioning sparingly

Air conditioners use about 10% extra fuel. However, over 80km/h air conditioning is more economical for fuel consumption than open windows (see aerodynamic drag)

9. Travel light

The more a vehicle carries, the more fuel it uses; an extra 50 kg of weight can increase your fuel bill by 2%.

10. Service your vehicle regularly

Well tuned vehicles reduce greenhouse gases up to 5% See **Australian Greenhouse Office** for further info.

ECO-BONUS FOR YOUR ELECTRIC VEHICLES

Electric Vehicles Pty Ltd is a Victorian based distributor of a range of electric scooters and bikes ideal for urban travel. Electric scooters and bikes represent an excellent alternative to car travel for distances that are short enough to be covered by rechargeable battery but may be challenging for commuters to cycle on a conventional bike.

Electric vehicles have zero emissions in operation, they make no noise, use no petrol, can be taken on trains, and can cover between 15 - 50 km range per charge depending on model. The batteries of these vehicles can also be charged up using solar energy with the correct conversion equipment. Likewise if your council has signed up to receive renewable energy/ greenpower from an electricity suppliers, the vehicle will have a negligible greenhouse impact.

The good news for ECO-Buy members is that through the ECO-Bonus scheme, Electric Vehicles Pty Ltd is offering a 10% discount on all purchases to all members who have an ECO-Bonus card. Encourage your council to consider purchasing one of these vehicles for short trips and trips that can be combined with a public transport journeys.

ACKNOWLDEGEMENTS

Much of the material in this newsletter has been sourced directly from the following documents or websites. **Environment Victoria**; **The Australian Greenhouse Office**; and the **Northeast Sustainable Energy Association.**

Direct links to all are provided through the highlighted text.

ECO-TRAVEL AT PORT PHILLIP

One Hundred and Fifty committed staff at Port Phillip Council are currently walking their way around Australia. As part of a sustainability initiative each of the staff has been issued a pedometer to monitor the distance they walk each day. Their combined distances have travelled round Australia once and they are going for a second lap.

Aside from encouraging staff to walk council has introduced several incentives to encourage staff use of public transport inside and outside work hours. Two-hour and daily travel cards are issued for work related city travel. Last year 978 work related trips were made thereby avoiding around 4800 km of car travel and the related greenhouse emissions. Additionally staff are encouraged to use public transport to travel to work through the commuter card program where council purchases annual Metcards in bulk and staff pay off their ticket via wages.

For the keen and committed, the council has purchased five bicycles for travel between offices and to nearby meetings. Sustainable Transport Officer, Helen Jennings says sustainable travel is about options and opportunities, and helping people to realise that car travel is not the only way to reach a destination. “As city traffic becomes increasingly congested commuters are finding cycling and taking public transport can significantly reduce travel time and stress” For further information contact Helen Jennings: HJenning@portphillip.vic.gov.au

COMMUNITY CARS ON YOUR KERB

The City of Darebin has launched Victoria's first car-share program, with schemes also being negotiated for other municipalities. Car-sharers register with a private company and pay a set monthly fee. Vehicles are kept in kerbside spaces, donated by the local council. When a user needs a car they book online, pay a small hourly fee, and use a smartcard to gain access to the nearest available vehicle. There is no insurance, no registration, and no cost for petrol or repairs. Seven vehicles can comfortably service 100 people.

GoGet, the company behind the Darebin scheme, has run a program in Newtown, Sydney for about 12 months. There, users pay $15 per month registration and a $6 hourly fee or a $30 registration charge and a $4 hourly fee. Yarra and Port Phillip councils are also expecting to establish car share programs in 2005 through the **Flo CarShare** company.

Darebin already has two cars available in Westgarth and expects more will be available in Fairfield in 2005. The fleet will expand according to demand. *Source: The Age, 9/10/04*