Ecodriving:
Drive Smoothly

How you drive directly affects the amount of emissions produced by your vehicle.

Ecodriving is a smooth, flowing and anticipatory driving style which aims to reduce fuel consumption.

Motor vehicles consume most fuel when accelerating – particularly under hard acceleration.

Braking doesn't consume fuel but, whenever you brake, you commit to future acceleration.

Ecodrivers brake and accelerate less frequently and less intensely than other drivers, and maintain a steady speed, rather than a fluctuating speed. To do this, ecodrivers look up, plan ahead and mind the gap (see the fact sheet on this topic).

Steady speeds, slow acceleration and gentle braking lead to:

- Less change in the vehicle's kinetic and potential energy states and, therefore, reduced fuel consumption and lower costs and emissions; and
- Reduced risk of incident or accident, reducing stress levels and the chance of injury or death.

Progressive Braking

Progressive braking involves braking early and gradually, avoiding the need for harder braking and more energy wastage.

First, *stop accelerating!* There is no point rushing to a red light. Many drivers continue feeding fuel to the engine even when the need to brake is obvious; a bad habit that prevents skilled ecodriving. Your vehicle will decelerate slowly from the various friction forces acting on it, as well as engine braking and changing gears.

When you apply the brakes, back off as the vehicle slows – you have only 25% of the vehicle's original kinetic energy left once you've halved your speed.

By progressively braking, you may be able to accelerate back to speed from a rolling start if, say, a traffic signal turns green. By maintaining that kinetic energy, you rely less on the energy required for your acceleration coming from fuel.

Progressive braking permits smoother stops and less wear and tear. It may also let you accelerate from a rolling start – conserving some of your original energy and saving fuel.

Further information:
Email: DPTI.LowEmissionVehicles@sa.gov.au
Web: www.lowemissionvehicles.sa.gov.au

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Be sure to allow for different vehicles, and for the load your vehicle is carrying.

Smooth Acceleration

Whenever you depress the accelerator pedal, you feed the engine more fuel.

Aggressive acceleration burns more fuel to get to the same target speed than smooth acceleration does.

Aggressive acceleration may also result in significantly increased air toxic emissions, compared to smooth acceleration. Noise impacts also tend to be higher.

You'll save fuel if you avoid unnecessary acceleration and keep your acceleration smooth and steady. As a guide, light vehicles should take about 15 seconds to accelerate from standing to 60 km/h (on a flat road).

Steady Speeds

Take care to hold a steady speed wherever possible – fluctuating speeds are, essentially, small, repeated acceleration and deceleration events. Fluctuating speeds, therefore, lead to increased fuel consumption.

Cruise control can be a useful tool for open roads over flat terrain. It is less useful for undulating or hilly areas, as it is reactive: A driver, on the other hand, can anticipate climbs and falls and adjust speeds accordingly.

Don't speed. Not only is it dangerous and illegal, it uses more fuel.

On the highway, speeding leads to increased aerodynamic drag, one of the most significant determinants of fuel usage at higher speed.

Around town, accelerating to, say, 10% over the speed limit requires over 20% more energy than sticking to the limit – and that energy comes from your fuel.

Details of other ecodriving techniques and complementary fuel saving actions are provided in separate fact sheets (see below).

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See Also:

- *Ecodriving*
- *Ecodriving: Avoid Unnecessary Idling*
- *Ecodriving: Look Up, Plan Ahead & Mind the Gap*
- *Ecodriving: Smart Use of Air Conditioning*
- *Ecodriving: Use Your Gears Effectively*
- *Ecodriving: Pro Tips*
- *Reducing Emissions: Maintenance and Tyres*
- *Reducing Emissions: Aerodynamics and Loading*

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