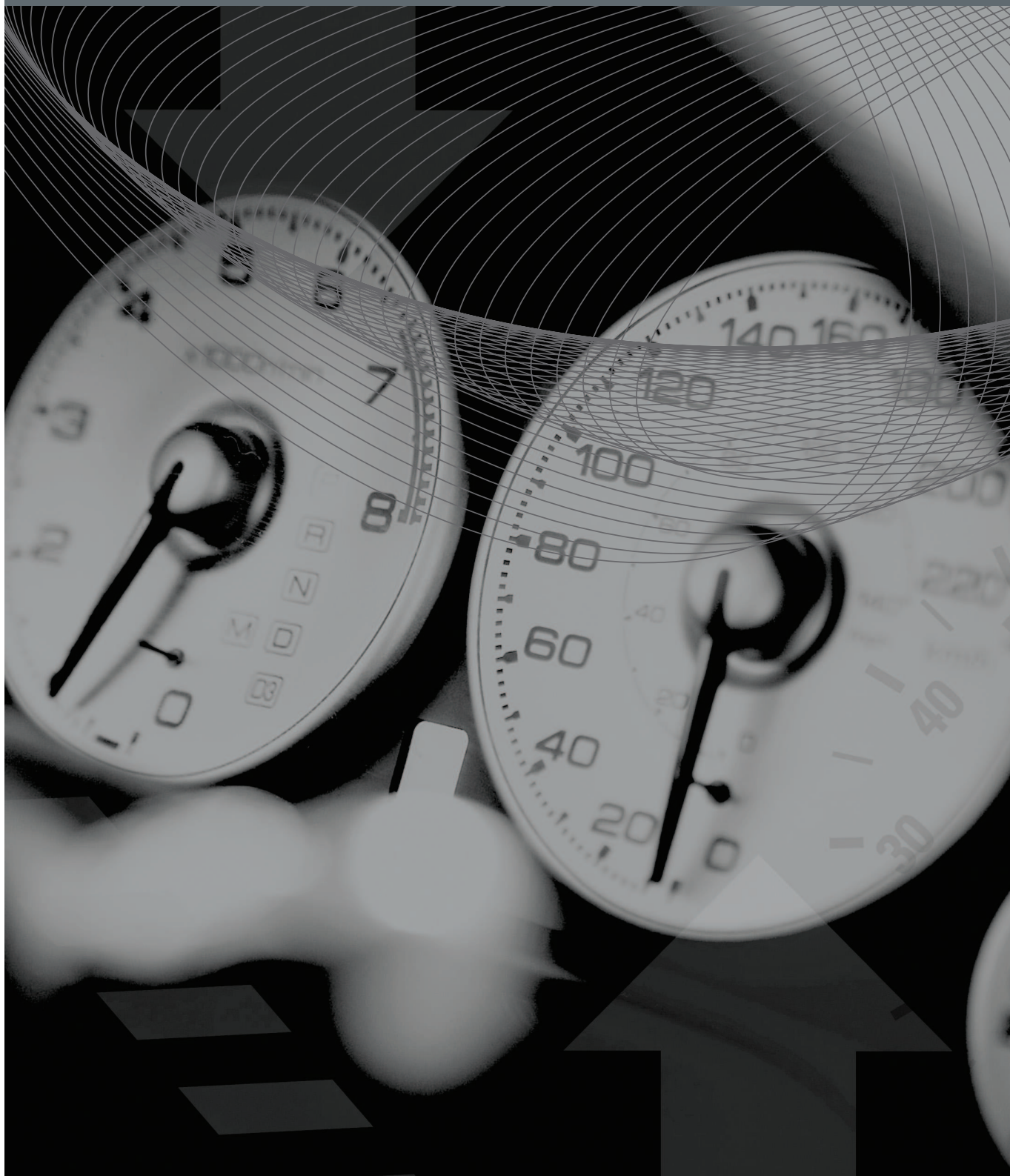


## A Guide to **Eco-Driving**

This guide sets out the techniques and principles of Eco-driving which can give savings of up to 10% on your fuel costs.



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## INTRODUCTION

Eco-driving is a driving style that reduces fuel consumption, greenhouse gas emissions, noise pollution and accident rates. These are smart, smooth and safe driving techniques that lead to an average fuel saving of 5-10%.

These techniques are primarily aimed at car and van drivers.

- Please use these only where it is safe and legal to do so.

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## HOW DO YOU ECO-DRIVE?

- **Check your tyre pressures regularly:**

If tyre pressure is only 25% down, your fuel consumption will be up by 2%.

- **Drive at a steady speed:**

Acceleration and slowing down uses fuel, so it is always more fuel efficient to drive at a constant, slower speed. Use the highest gear possible and with low engine revs.

- **Decelerate smoothly:**

When you have to slow down or stop, gently release the accelerator in good time, leaving the car in gear.

- **Change up a gear:**

If your vehicle is running at 2,000 or 2,500 revs, it is time to move up a gear.

- **Anticipate traffic flow:**

Look ahead as far as possible and adjust your driving accordingly. By watching the road ahead your driving will become smoother, safer and more economical.

- **Avoid idling:**

Switch off your engine when stopping at traffic lights and in queues. At short stops you can save about 0.5 – 2 litres of fuel per hour, depending on your engine type. So, switch off if you expect to be stopped for just 20 seconds or more. It is an easy thing to do and it will save fuel and money. When you re-start, you don't need to use the accelerator.

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## ADDITIONAL TECHNIQUES

- **Cruise control:**

Using Cruise Control will make it easy for you to drive at a steady speed in a relaxed manner. You'll avoid speeding fines, save fuel and reduce exhaust emissions.

- **Driving around bends:**

There is an art to driving around bends in the road. You need to consider your speed, the kind of bend you are approaching, the road condition and weather conditions. To reduce your speed when you drive into a bend, gently use the brakes rather than changing to a lower gear. However, the best approach to a bend is to anticipate it. So, if you see a bend coming up ahead, you can adjust your speed and start to slow down before you arrive there. In this way, you may be able to negotiate a bend without the use of brakes.

If you tend to switch between sharp acceleration and braking jerkily on a bend this can result not only in higher fuel consumption but also in a transfer of weight on the axes, which can lead to a technical fault with your car and potentially even to an accident.

- **Driving up hills:**

To save fuel when you drive up a hill, you need to be in the highest possible gear with almost maximum acceleration.

- **Weight:**

The weight of your vehicle is the most important factor influencing fuel consumption. By adding a load of 100kg on a vehicle that weighs 1,500kg you will increase its fuel consumption by about 6.7%. It is therefore important that you check that every item being transported is necessary for that journey.

- **Aerodynamics:**

The next most important factor that will influence your fuel consumption is the aerodynamic shape of your vehicle. Cars that have an aerodynamic, or streamlined shape will use less fuel because air can flow easily over them with little resistance.

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## ILLUSTRATION OF AERODYNAMIC CAR SHAPE

Walk around your car and look out for any item that protrudes from the body work. Removing a roof rack can reduce fuel consumption by up to 5%. Cycle carriers and roof boxes can greatly increase air resistance and reduce your car's aerodynamic rating. This can increase fuel consumption at high speeds by up to 20%. Finally, even driving with an open window will affect the car's aerodynamics – so open up the vents but close the windows, particularly when driving at higher speeds.

- **Tyre pressures:**

Another important way to increase safety and keep your energy consumption low is to check your tyre pressures and their conditions at least once a week. Lower tyre pressures will also affect how your vehicle handles, and braking distances will be increased. Always check tyre pressures on cold tyres, ideally before driving your vehicle or after you have driven only a maximum of 3km. If you've driven more than 3km then you must wait ten minutes to let them cool down first.

- **Think about vehicle load:**

Two different tyre pressures are usually recommended, one for when your vehicle has no load and/or driving at normal speeds and one for driving with a full load and/or mainly at high speeds. Your instruction manual will have these readings, but there may also be on a label on the door post or on the fuel filling flap of your car.



*Images courtesy of Citroen.*

- **Fuel saving devices:**

The rev counter, cruise control and on-board computer will all help you to manage your fuel economy. Make good use of them, and make sure you understand what they do. For example, most cars now have on-board computers which show average and actual fuel use. The actual fuel consumption is a very useful reading, because you get immediate feedback on your driving behaviour and its influence on fuel use. You can monitor your fuel usage by driving using some of these ecodriving techniques, and watching the immediate impact on your fuel consumption.

A shift indicator shows you when it is most fuel-efficient to change up a gear, and can be found in most modern cars.

- **Fuel consuming devices:**

Using air-conditioning, running energy-hungry hi-fi systems and heaters can all add to high energy use. Air conditioning on its own can increase your fuel consumption by as much as 20%, so use sparingly.



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## CONCLUSION

There are many things that you can do to reduce your fuel consumption and your greenhouse gas emissions, ranging from checking your tyre pressures regularly to driving at a steady speed. It is important to make these changes, but, like everything, it can be best to just make a few changes at a time. Driving safely and legally is of paramount importance.

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For more information refer to SEI's other Transport Energy Guides, visit [www.sei.ie/business](http://www.sei.ie/business)



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