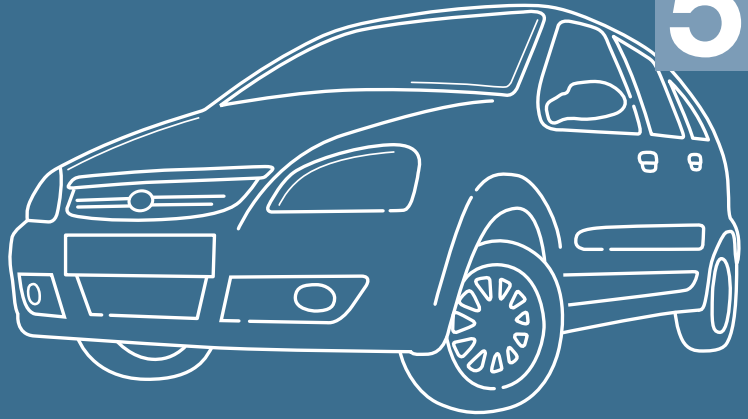


Saving energy in business: transport



For most New Zealand businesses, fuel represents a substantial portion of operating costs – more than 11% if you have a heavy vehicle fleet.

The good news is that you could save 20% on your fuel bill through relatively simple measures such as educating staff about good driving practice, and regular maintenance.

As well as improving profitability, many fuel saving measures also improve driver safety – resulting in increased productivity and fewer insurance claims.

At the same time, you'll reduce your carbon footprint through reduced CO₂ and other emissions, providing an opportunity to enhance your brand and reputation.

Upskill your staff

The way your employees drive has the single biggest influence on how much fuel your business uses. In fact the difference in fuel consumption between a good and a poor driver can be as much as 30%. Driving economically also has proven safety benefits. Investing in driver training may also help present a more professional image for your business, improving your reputation and boosting staff pride.

Drive smoothly

Driving aggressively (sudden braking/acceleration or deceleration) uses more fuel than a smooth driving style. Train your drivers to look ahead to anticipate hazards and use gears effectively.

Keep to the speed limit

Make sure your drivers understand that speeding is unacceptable. Aside from the fact that it's illegal, for every 10 km/h you travel over the speed limit you increase fuel consumption by 10%. Driving within the legal limit also means drivers are less likely to have accidents or incur fines.



Reduce engine idling

Idling increases engine wear, wastes fuel and produces unnecessary emissions. Make it a policy that if drivers are going to be stationary for more than 2 - 3 minutes, they should switch off their engines. A vehicle should certainly never be left to idle unattended.

Case study

One company decided to tackle its fuel usage with a range of measures including driver education, journey planning, vehicle selection and maintenance. Over three years, it reduced fuel consumption by 18% and halved the number of safety-related incidents. Their next target is to increase their fuel savings to over 20%.

Use ventilation and air conditioning appropriately

Depending on the size and type of vehicle, air conditioning can increase fuel use by as much as 10%. While open windows also increase drag and fuel use, at speeds of less than 80 km/h, they're a more efficient way of cooling a vehicle.

Reduce unnecessary short trips

A cold engine uses 20% more fuel, so it's best to eliminate unnecessary trips and make the most of each outing. If staff commonly drive to the same place and you have a centralised vehicle booking system, encourage them to try to 'hitch a ride' with someone else before booking out a car.

Remove unnecessary equipment and fittings

The heavier and less streamlined a vehicle is, the more energy it uses. Unnecessary weight increases fuel consumption, by around 2% for every 50 kg. So if equipment isn't needed on a particular job, leave it behind. Anything that increase drag such as roof racks should be removed when not needed.



Maintain your fleet

A regularly-maintained vehicle uses significantly less fuel than a badly-maintained one. Here are some commonly-neglected areas that can push up fuel use.

Maintenance	How it works
Check tyre pressures regularly	Under-inflation increases rolling resistance - which uses more fuel. It also reduces the life of the tyre and affects handling and braking
Change engine oil regularly	Worn out engine oil increases engine wear and fuel consumption. Also consider using low viscosity engine oils where appropriate
Keep engines tuned properly	Poorly-tuned engines can use 20% more fuel than well-tuned ones
Keep air filters clear	Clogged air filters increase fuel consumption by as much as 10%
Ensure correct wheel alignment	As well as impacting on safety, poorly aligned wheels make the vehicle work harder, increasing fuel use and tyre wear

Choose the right vehicle for the job

Whether you own or lease your fleet vehicles, review your fleet regularly to ensure you have the right vehicles for the job. When deciding which vehicles should be replaced, you'll need to consider factors such as the type of vehicle, how old it is, weight and fuel efficiency.

Choose the right size

The fuel efficiency of vehicles with similar engine sizes can vary widely. But in general, the larger the engine the more fuel is used. In fact, for heavy vehicles, every additional 5 hp can increase fuel consumption by 2%. So matching engine size to the required task will give the best fuel economy. If only some of the fleet is used for long distance driving or larger loads, consider including smaller, more economical vehicles in your fleet for shorter trips or city driving.

Fact

Overseas studies show that driving efficiently does not significantly increase travel time. A recent Australian study found a 61km journey took only five minutes longer when driving smoothly rather than aggressively - with a 30% saving in fuel consumption.

Streamline vehicles and loads

When travelling at high speed over half the energy used in moving a vehicle along the road is used in overcoming aerodynamic drag. Reducing the drag on a vehicle would enable it to use significantly less fuel at motorway speeds.



Consider alternative fuel systems

‘Hybrid’ vehicles are becoming increasingly available and affordable in New Zealand. They feature a rechargeable battery that allows them to run on both electricity as well as conventional fuel, significantly reducing fuel use.

Consider newer diesel vehicles

Modern diesels can be up to 30% more economical than petrol equivalents. Buy a vehicle as new as possible to capitalise on the most up-to-date fuel efficiency technology.



The vehicle fuel economy label shows how much fuel a car uses and how much it costs to run a year.

Compare makes and models for best performance

It's worth remembering that similar sizes and types of vehicles can vary widely in terms of fuel economy. In fact the best performing vehicles in each class can use two and a half times less fuel than their worst performing counterparts.

Sample calculation

If a business has a fleet of 20 medium-sized petrol-fuelled cars which each drive an average of 45,000kms a year, the reduction in fuel use from choosing the most efficient model available could be as much as 47,000 litres every year. That's a saving of around \$80,000 per year (not including any fleet fuel discount).

Change your 'travel culture'

Encourage staff to think about reducing their fuel consumption on the way to and from work as well. Options to consider include a workplace car pooling scheme, or a secure place for bike storage during work hours. Ask staff for their ideas.

Allowing staff to work remotely, and setting up systems to enable this, may be a practical way to reduce the impact of your business travel. It also reduces the energy load on commercial premises when fewer people work in them.

For many companies, the bulk of their fuel use and carbon emissions comes from air travel. If your company is in the habit of flying people to face-to-face meetings, reconsider this – it may be worth investing in phone or video conferencing to enable 'virtual meetings'. This technology has become common in many sectors, and there may be facilities handy to you that can be hired.

From the good ideas file - biofuels

Another way of reducing the carbon footprint of your transport fleet is by switching to biofuel blends. By adding a renewable fuel to the mix, you are reducing your fleet's air pollution and carbon emissions. Bioethanol blends – which can be used in place of petrol – are currently available at service stations in many parts of the North Island. Biodiesel, an alternative for diesel vehicles, is being increasingly produced in New Zealand although it's not available from fuel retail outlets. It can be bought directly from producers. See www.eeca.govt.nz/biofuels for more information. Check with the vehicle manufacturer if you're unsure whether your vehicles are biofuel-compatible.

Action checklist: transport

	Educate staff who drive for work on fuel-efficient driving habits through internal or external training
	Include fuel-efficient driving advice in company policies and/or induction information for new staff
	Introduce an incentive programme to encourage employees to save fuel
	Consider linking fuel usage to performance targets for employees who regularly drive for work
	Encourage staff to combine trips and share rides where possible
	Promote a fuel saving culture – for example, don't put pressure on your drivers to speed to meet deadlines
	Consider introducing a workplace travel plan to reduce staff fuel use on the way to and from work
	Enable staff to work remotely where practical
	Hold 'virtual meetings' through phone or video conferencing
	Implement a proactive maintenance programme rather than relying on the minimum required to pass WoF or CoF checks
	Introduce a fuel monitoring programme to keep track of how much fuel each driver uses and highlight fuel card inconsistencies
	Look at ways to improve route selection and logistics to maximise the efficiency of each trip and cut down on wasted time and fuel
	Check with your vehicle manufacturer to see if your fleet is biofuel compatible
	Don't automatically renew the lease on any vehicle in your fleet without reviewing it to ensure you still have the best vehicle for the job
	If you own rather than lease fleet vehicles, regularly review their fuel performance – replacing older vehicles with newer ones that use less fuel could save your business money over the long term
	When considering purchasing or leasing a particular type of vehicle investigate how it rates in terms of fuel economy
	Promote any step you take to improve fuel efficiency to customers and staff
	Consider undertaking a fleet audit to determine the efficiency of your current fleet and identify the most cost-effective fuel-saving opportunities

For more information

For a guide to the safest and most fuel efficient vehicles visit www.rightcar.govt.nz and for more on fuel efficient driving visit www.fuelsaver.govt.nz

The New Zealand Transport Agency provides a guide to selecting fuel efficient heavy vehicles at www.nzta.govt.nz/vehicle/choosing/heavy/selecting. It also has materials for workplace travel planning at www.nzta.govt.nz/resources/sustainable-transport/workplace-travel-plan

From mid-2010 the Ministry of Transport will provide the SAFED NZ programme for truck and bus drivers, covering safe and fuel-efficient driving. To register your interest email safed@transport.govt.nz

For more information on using biofuels, see www.eeca.govt.nz/biofuels

