

small business and climate change what affects you and what you can do



Transport

Drivers of change in small to medium transport businesses

- World oil prices are recovering after the drop caused by the global financial crisis, and are expected to rebound strongly in the next few years
- Increases in energy prices, in part due to carbon pricing, will increase the costs of petroleum-based fuels such as petrol and diesel
- Fuel used for some transport in some sectors will be subject to carbon emissions pricing. Other transport fuel use, such as for on-road light commercial vehicles, will be exempt. Charges for transport fuels subject to carbon pricing will be made through changes to fuel excise and fuel tax credits
- Changes in the energy market are putting pressure on energy prices, and will also increase the costs of inputs that are energy-intensive to produce, presenting challenges and opportunities to SME transport businesses.

What you can do in your small business

- Review your exposure to increased prices and other climate change adjustment costs and the exposure of your competitors
- Take proactive steps to increase fuel efficiency and provide details about your business's environmental credentials. This can address customer concerns and provide cost savings
- Upgrade to a newer more fuel efficient vehicle or change fuel type. This can improve fuel efficiency and reduce greenhouse gas emissions
- Practice more efficient driving habits and optimise trips and packing to save on fuel.

A changing business environment

Small to medium enterprise (SME) transport businesses will be affected by rising energy prices from changes to the energy market, climate change policies, including the carbon emissions pricing scheme, and changing consumer preferences, including those of business-to-business customers.

Fact sheets in this series

General climate change information:

- business effects of climate change policies
- weathering climate change impacts in your small business
- changing climates for large and small consumer markets.

Sector-specific climate change information:

- accommodation
- business and professional services
- cafés and restaurants
- manufacturing
- retail and wholesale trade
- tourism
- transport.



Adjusting to climate change policies and energy prices

Energy price increases due to international oil prices, overseas climate change policies, carbon pricing and the expanded renewable energy target will most likely affect SME transport businesses.

Carbon pricing for transport fuels

From July 2012, carbon pricing will apply to fuels used in:

- domestic aviation and shipping
- rail transport
- off-road transport
- non-transport use of liquid and gaseous fuels

Carbon pricing will not apply to:

- on-road light commercial vehicle fuel use
- off-road fuel use in the agriculture, forestry and fishing industries
- on-road use of gaseous fuels
- transport fuels used as lubricants and solvents
- ethanol, biodiesel and renewable diesel

The Federal Government plans to introduce carbon pricing for fuels used by heavy on-road transport in 2014.

Charges for transport fuels subject to carbon pricing will be applied through changes to fuel tax credits and excise, not through buying and surrendering carbon permits.

Energy prices

The renewable energy target is driving changes in how we produce electricity and will, along with network investment to ensure supply reliability, put pressure on retail electricity prices.

Petroleum refining is energy and emissions-intensive, meaning that increases in energy prices and the introduction of carbon pricing will increase the costs of petroleum-based fuels such as petrol and diesel.

While Australia sources around 70 per cent of its refined petroleum products from domestic refineries, we are a net importer of crude oil and refined petroleum products and are exposed to world oil prices.¹ Despite a recent drop due to the global financial crisis, world oil prices are recovering and are expected to rebound strongly in the next few years.²

Vehicles emissions standards

The Federal Government proposes to implement a new mandatory vehicle emissions standard covering all light duty vehicles (up to 3.5 tonnes gross) including light commercial vehicles. In Australia in 2010 the average CO₂ emissions of new light vehicles sold were 213 g/km. The Government proposes an average mandatory standard of 190 g/km by 2015.³

What you can do in your small business

Identify sources of carbon emissions

Transport, postal and warehousing SMEs produce an average of 257 tonnes of carbon dioxide equivalent (CO₂e) per year, or 83 tonnes CO₂e per employee.⁵ 59 per cent of these emissions are from diesel use. Actions to improve fuel efficiency will therefore reduce the carbon footprint of your business.

No regrets to improving fuel efficiency

In all cases, we recommend identifying and implementing 'no regrets' actions. This means actions that will benefit you regardless of the effect of climate change policies. Improving the energy or fuel efficiency of your business is likely to provide long-term gains from reduced costs.

There are a number of ways in which energy is used (and lost) in vehicles.⁶

Improving vehicle efficiency

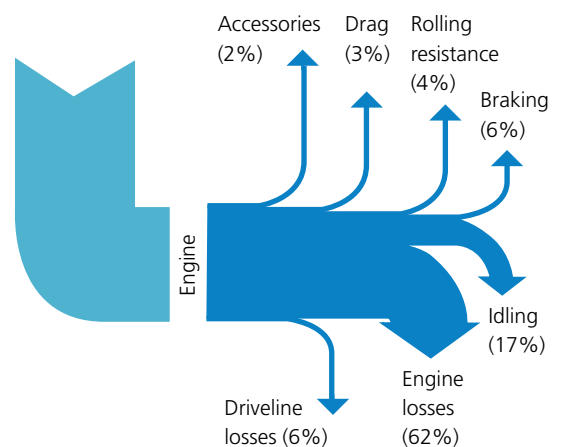
Fuel efficiency improvements can be achieved by reducing energy losses in the operation of your vehicle.

The key areas for improving efficiency include:

• Increasing engine efficiency

When purchasing a new vehicle, design features to look for that increase efficiency include higher compression ratios, improved intake and exhaust manifolds, improved cylinder head and valve port design, use of two or more intake valves and two exhaust valves, electronic injection and engine management

Vehicle energy use (and losses)



• Limiting engine speeds to reduce driveline losses

Driveline losses can be minimised with transmission technologies such as shift indicator lights in manual vehicles and continuously variable transmission in automatic vehicles



- **Reducing vehicle weight, reducing drag and tyre rolling resistance**

The more a vehicle carries the more fuel it uses – an extra 50kg of weight can increase your fuel bill by around two per cent

- **Reducing energy consumption from accessories**

More efficient alternators, electric power steering and oil and water pumps can reduce energy consumption. Air conditioners also use extra fuel. However, at speeds of more than 80 km/h, the use of air conditioning is better for fuel consumption than an open window (due to drag).⁷

Fuel efficient driving behaviour

Driving styles can have a significant impact on fuel economy. Simple adjustments to the way you or your employees drive to reduce fuel use include:

- **Driving in high gear** – Most engines run most efficiently between around 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. Automatic transmissions shift up more quickly if you ease back slightly on the accelerator once the vehicle gathers momentum

- **Driving smoothly** – Keep a good distance from the vehicle in front and anticipate traffic flows to avoid fuel consumption from unnecessary braking and accelerating

- **Minimising idling** – Minimise fuel wasted in idling by stopping the engine whenever your vehicle is stopped or held up for an extended period of time

- **Limiting your speed** – Higher speeds increase fuel consumption.⁸

Leverage consumer preferences to your market advantage

Awareness and concern about climate change is increasing, and will affect people's decisions about what they buy. Consumers are interested in the environmental effects of their purchases, and all steps of the production chain are being considered.

Transport emissions can play a key role in the environmental effect of a product, with a possible consumer response being to buy more locally produced products.

Concerns about environmental effects generally become more important in customer decisions in relation to transport. Proactive steps to increase fuel efficiency and providing details about your business's environmental credentials may be helpful in alleviating these concerns.

Offset options for market differentiation and environmental outcomes

As a transport SME, a significant proportion of emissions created in your business operations will be unavoidable. In addition to reducing emissions through behaviour and technology changes, offsetting emissions can be an effective way of addressing environmental effects.

Many travel and transport companies (such as airlines and hirecar companies) have provided the option for customers to offset the greenhouse gas emissions associated with their travel by purchasing 'carbon offsets'. This can be done as part of a unilateral strategy toward offsetting your business's emissions, or by giving customers the option of paying an additional amount to offset the emissions associated with the service they are purchasing.

However, care needs to be taken when implementing an offset strategy or on-selling as part of a marketing strategy. The *Changing climates for large and small consumer markets Fact Sheet* provides further details about carbon neutrality, carbon offsets and your responsibilities.

Facts about fuel and fuel efficiency

Older vehicles are typically less fuel efficient than new vehicles. Upgrading to a newer model can improve fuel efficiency and reduce greenhouse gas emissions.

Converting to LPG or petrol-ethanol blends can be a cheap and effective way to reduce fuel costs. A high ethanol blend (E85) requires vehicle conversion, while a low ethanol blend (E10) can usually be used in existing ethanol vehicles.⁴

Ethanol blends and LPG have lower greenhouse emissions per litre of fuel consumed than petrol or diesel, and are also cheaper. However, LPG and ethanol blends also typically have lower energy content than petrol or diesel, meaning that equivalent cars will generally get less kilometres per litre from LPG and ethanol blends than for petrol or diesel.

Diesel as a fuel creates more greenhouse gas emissions per litre than petrol, but diesel engines (particularly newer ones) also tend to be more fuel-efficient than petrol engines. This can result in less emissions being produced overall. Diesel engines are most efficient when the engine is operating within a narrow range of speeds and are best suited to highway driving.

Using hybrid vehicles can significantly reduce emissions. They provide the greatest benefits in stop/start conditions such as city driving where use of the electric engine is maximised.

1 ABARE (2010), *Energy in Australia 2010*, Canberra, p.49 and p.51

2 US Energy Information Administration (2010), *Short-Term Energy Outlook*, May available online at <http://www.eia.doe.gov/emeu/steo/pub/>

3 Australian Government (2011), *Securing a clean energy future. The Australian Government's Climate Change Plan*

4 McLennan Magasanik Associates (2008) *Australian Emissions Reduction Model – Transport Sector Functionality and Assumptions*, report to the Climate Change Institute, May 2008, p.17

5 Rothberg. A. (2011), *The Carbon Footprint of Victoria's Small and Medium Enterprises*. East Melbourne: Carbon Down

6 US Department of Energy, <http://www.fueleconomy.gov>

7 Commonwealth Government *Green Vehicle Guide*, available at <http://www.greenvehicleguide.gov.au>; International Energy Agency (2005), *Making vehicles more fuel efficient – Technology for real improvements on the road*, France

8 Commonwealth Government *Green Vehicle Guide*, available at <http://www.greenvehicleguide.gov.au>

VECCI's business sustainability products and services for SMEs

Carbon Compass

Carbon Compass provides free access to a range of energy, water and waste reduction hints, tips and resources to support business reduce costs and their carbon footprint at the same time.

Visit www.carboncompass.com.au

Grow Me The Money

A 12-step program, Grow Me The Money will take your business through strategies to reduce your carbon footprint, save money and report credibly on your savings to customers, staff and the community. Successful Grow Me The Money participants save an average of 13 per cent or \$8,300.26 across all three utilities (electricity, gas and water), and deliver more than 69 tonnes of carbon abatement.

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Sustainability Consulting

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- Sustainability strategy, policy and environmental management system development
- Energy and waste opportunity assessment
- Action planning and implementation
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VECCI consultants come to you, saving valuable time, and their assistance is tailored to your unique circumstances.

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Energy Bill Review

VECCI consultants can review your business's electricity plan to identify whether you could be saving money with a different plan or retailer.

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These fact sheets were developed by VECCI Sustainability Services. Last updated December 2011.

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Sustainability Training

Want to know more and learn from other businesses? In a new era of 'green choices', VECCI's dedicated training and briefings can help your business reduce its environmental footprint, save money, and give you a competitive advantage. Delivered throughout Victoria, prices start from just \$45.

The following programs are currently available:

Carbon Management 101: cutting through the carbon jargon. Who should attend? All small business representatives interested in climate change and related policies, carbon management practices as well as identifying opportunities for making environmental and financial savings.

Resource Efficiency and Your Business: hands on sustainability practices for SMEs. Who should attend? Small business representatives interested in tools and techniques that assist to track their resource use and realise financial savings.

Marketing Your Environmental Business Credentials: essentials of environmental marketing. This half-day workshop explores the potential of the 'green' consumer as a target market, how to avoid 'greenwashing', and identifies easy steps you can undertake to communicate your environmental achievements and initiatives.

Creative Thinking and Sustainability workshop: Your sustainable edge in changing times. This half-day workshop is packed with practical tips and hands on examples demonstrating the four cornerstones of creative thinking and uniting these with opportunities for sustainable business practice. Who should attend? All business representatives interested in smarter decision-making and sustainable business practices.

Green Office Briefing: simple steps to green your office. This two hour briefing is for SMEs and larger businesses who wish to educate their staff regarding electricity consumption, paper use, waste disposal and purchasing practices in the office. This interactive briefing empowers staff to take immediate action in implementing green office practices.

To book, visit www.vecci.org.au/training or call VECCI on 03 8662 5333.



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