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# Cashing in on Carbon

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A climate change guide  
for Victorian businesses

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**THE CLIMATE GROUP**

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This is part of  
**THE CLEAN REVOLUTION**

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**“All Victorian businesses,  
large and small, have an  
important role to play in the  
low carbon transition.”**

Jacinta Allan  
Minister for Industry & Trade

Over the coming years, countries around the world will make the shift to a low carbon future. It is vital that Victoria and its businesses are at the forefront of this transition.

Victorian businesses are flexible and innovative and have met many different challenges, including increasing competition from newly emerging nations, the global economic downturn and technological change.

The need to reduce greenhouse gas emissions represents a new challenge – but one that will also create opportunities for businesses that are prepared to improve their energy and resource efficiency and to identify and respond to demands for new and improved products and services.

Reducing our emissions will mean tapping into low carbon energy supply, changing our use of transport and logistics, and responding to shifting consumer preferences towards sustainable, low emissions products. Adapting to those effects of climate change that we can no longer prevent will bring further changes to the business environment.

Inherent in this change is also opportunity: the opportunity to reach new standards of efficiency and raise the bar on productivity; the opportunity to expand into new low carbon industries and harness new green jobs; the opportunity to imagine a better, more prosperous future – and be among the first to build it.

The foundations for a new low carbon economy are already being laid across the globe, and Victoria is well-placed to take a leading role in the transition. We have the innovation capabilities, the public and private financial capacity, abundant renewable resources and, as the case studies in this Guide show, a progressive core of businesses lighting the way.

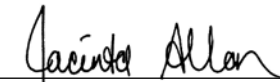
The Victorian Government is committed to providing the policy framework that will underpin a sustainable, prosperous economy as well as supporting businesses and the wider community to reduce emissions.

The measures outlined in our Climate Change White Paper Action Plan are an important step. We are promoting the development of clean, low carbon technology by developing a ClimateTech Strategy and by establishing a new Clean Business Fund. We will establish the Victorian Carbon Exchange, helping to develop Victoria's offset industry. We will expand the Energy Saver Incentive Scheme so it can provide incentives for small and medium businesses to improve energy efficiency and save money in the process.

All Victorian businesses, large and small, have an important role to play in the low carbon transition. Even small actions, if taken up by businesses across the State, can have a significant impact on Victoria's emissions – and on the competitiveness of our economy.

This is what makes this Guide so timely. It will arm businesses with the information they need to reduce their greenhouse gas emissions. It also demonstrates how going low carbon can cut costs and increase profits.

I recommend this Guide to the businesses of Victoria, as a tool to help you take effective action and make the most of the opportunities the low carbon transition will bring.



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Jacinta Allan

Minister for Industry & Trade

**“Inherent in change is also opportunity - the opportunity to imagine a better, more prosperous future”**

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Whether it is rising global temperatures or energy and fuel costs that motivate our actions, the need to make changes to the way we do business is increasingly urgent.

Victoria has one of the highest levels of greenhouse emissions per capita of any state around the globe. If we are to play our part in helping the world avoid dangerous temperature rises, then businesses, government and the wider community will all need to take action to reduce emissions.

In the medium term, it is highly likely that Australia will have a legislated price on carbon. Although we don't yet know the details, this is a development that will affect businesses and citizens alike.

The pace of change towards a low carbon economy is accelerating. From Brussels to Beijing, Scotland to South Africa, businesses and governments are starting to seize the opportunities that the clean revolution is bringing. They are taking action to reduce emissions and realizing the benefits in increased productivity and efficiency, turning this into revenue and competitive advantage. In an increasingly globalised world, it is vital for Victoria's economy that we act at the head of the field, rather than lagging behind. As awareness grows further, consumer preference for those businesses that take climate change seriously will mean a tougher environment for those that don't.

The good news is that businesses are waking up to the opportunity available. Throughout, there are examples of businesses that have taken strong, decisive action to reduce emissions, generating significant benefits as a result, often in a short amount of time.

Supply chain giant, Linfox for example has been able to reduce emissions by 14 per cent in three years, despite an increase of 21 per cent in the distance its vehicles travel. This has created a range of benefits, including huge savings on fuel costs.

Family-run bakery chain, Ferguson Plarre, has saved around \$250,000 – \$300,000 each year on electricity costs by building a more energy efficient head bakery. The savings mean that they had already covered the costs of their changes within a year. Their green approach has been a great tool for the company's public profile, as well as employee engagement. These and other examples in this Guide can provide businesses with the inspiration and motivation to start on their own journey.

While some companies are ahead of the curve – too many are struggling to understand what they need to do, which approach and processes are best for them, and what resources and incentives are available.

This Guide will help them tackle these questions. It will assist businesses in choosing and prioritising different strategies as they determine the best course of action for them. It shows how to engage employees, measure emissions, take steps to reduce them and share achievements with the public.

This Guide also explains the increasing range of other resources and support that exists for businesses of all shapes and sizes that are looking to go low carbon. It pulls together the options – providing an easy to use digest of the help available and acts as a gateway to the range of organizations that are working to help businesses make the low carbon transition.

The Climate Group is proud to deliver this Guide in collaboration with the Victorian Government. We hope that it will help businesses to become climate leaders in their own fields, to realize the substantial benefits, and to put themselves at the heart of the clean revolution.

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Rupert Posner



Australia Director, The Climate Group

**“This Guide will assist businesses in choosing and prioritising different strategies as they determine the best course of action.”**

Rupert Posner  
Australia Director, The Climate Group

**IT IS 2030.**

In just two decades the global economy has been transformed. Sustainability is now a core measure of business success – and Victoria has led the charge.

Our innovative business community has worked hand in hand with proactive government, in a partnership that has allowed Victoria to ride the front of the green wave and take full advantage of the opportunities provided by the new low carbon economy.

And today we enjoy the dividends: electric cars mean the air we breathe in our cities is as clean as that in the countryside; smarter controls send water through healthy rivers, towards those uses that produce the most value; Victoria is Australia's leading solar energy state, and the City of Melbourne has become an international hub of carbon trading.

Victoria is studied internationally as an example of best practice in sustainability, and exports cutting-edge low carbon technology and services around the globe.

We live in a prosperous, healthy, and environmentally sound state, and Victorians look to the future with optimism.

Today, leading thinkers across business, government and the community are moving us toward this bold vision of the future. The purpose of this Guide is to help you play your part, by identifying the actions that can help your business begin to save both carbon emissions and money.

For those businesses with the ambition to be leaders in their sector, this Guide presents strategies for acting beyond your organisational boundaries and advice for thinking creatively about how you might leverage your position within the broader economy.

**“We believe strongly that climate change is real, and reducing emissions is the right thing to do. And at the end of the day, it’s good for business too.”**

David McInnes  
Sustainability Manager, Linfox

**WHY GO LOW CARBON?**

As low carbon practices increasingly become the new standard, it will be the early movers that take the competitive advantage. Reducing your carbon footprint can help you to:

**INCREASE YOUR MARKET SHARE:** In studies commissioned by Unilever, 90 per cent of consumers indicated they wanted business to invest in more sustainable practices.<sup>1</sup> With 67 per cent of consumers more likely to buy a product with a low carbon footprint, you can make this a key point of differentiation in your sector. As low carbon becomes the norm, those companies slow to act will struggle to maintain market share.

**CONTAIN OPERATING COSTS:** Many actions that reduce carbon emissions, such as improving the energy efficiency of your office, manufacturing process and fleet of cars, will also reduce energy bills. These measures can help to protect your business from the rising prices of oil, gas and electricity. In fact, one business showcased within this Guide cut energy bills by up to 70 per cent – saving hundreds of thousands of dollars each year.

**IMPROVE RELATIONSHIPS WITH SUPPLIERS:** Because the carbon intensity of each business along a supply chain determines the carbon footprint of the final product or service, more and more large corporations are examining their entire supply chain as part of their emissions reduction strategy. Westpac, for example, currently requires 85 per cent of its procurement to go through suppliers that have submitted information about their sustainability practices.<sup>2</sup>

**ATTRACT AND RETAIN EMPLOYEES:** Job-seekers are increasingly seeking employment that provides personal satisfaction beyond their wage. A recent survey by Tandberg and Ipsos MORI found that 87 per cent of Australian workers would be more inclined to work for ‘green’ companies.<sup>3</sup> Moreover, studies of green buildings have repeatedly shown productivity and health benefits for workers, accruing from indoor environmental improvements such as cleaner air.<sup>4</sup>

**ATTRACT INVESTORS:** Acting on your carbon footprint can signal to investors you are aware of the risks presented by climate change and are preparing for them – making you a safer prospect for investment. A Goldman & Sachs study has shown just how attractive such responsible businesses can be: those with leading environmental and social responsibility track records have out-performed average international growth rates by 25 per cent.<sup>5</sup>

**KEEP COMPETITIVE:** In an IBM business study, 68 per cent of senior executives said they were implementing sustainability as an opportunity for future growth, and more than 50 per cent said their sustainability activities were giving them an advantage over their top competitors.<sup>6</sup>

## SUPPORT IS AVAILABLE.

A broad range of private, non-profit and government organisations are working to help businesses of all sizes make the low carbon transition and unlock these competitive advantages. To help you navigate through the range of services and incentives available, this Guide outlines some of the key Victorian agencies, organisations and their programs, including:

### **The Environment Protection Authority Victoria (EPA):**

The EPA is an independent statutory authority that establishes and regulates environmental standards. The EPA works with organisations to meet and go beyond standards through developing environmental services such as its 'Carbon Management Principles'.

**Sustainability Victoria:** Sustainability Victoria was established in 2005 to help Victorians be resource efficient and live more sustainably at home, at work and in their communities. It acts as a catalyst for sustainable growth and development, supporting government policy and complementing the activities of government and non-government agencies. It works with business, the community, individuals and the government to achieve meaningful outcomes in greenhouse gas abatement, energy efficiency, renewable energy, waste reduction and the smarter use of resources.

**The Australian Industry Group (AI Group):** a national industry association representing small, medium and large business, offering consultancy, training services and business linking programs such as the 'Sustainable Business Network', 'Environmental Solutions Forum' and the 'Sustainability Covenant'.

### **The Victorian Employers' Chamber of Commerce and Industry (VECCI):**

independent and non-Government, VECCI makes its members more successful by working for their interests and delivering products and services for growth, assurance and excellence. Carbon Down, Grow Me The Money and Carbon Compass are part of the offering from VECCI Sustainability Services.

**The Energy Efficiency Council (EEC):** the peak body for energy services and products in the business sector. The EEC aims to make Australia an energy efficient, competitive and low carbon economy.

You can find more detailed descriptions of these organisations' programs throughout this Guide, along with full contact details on pages 40-42 in the Victorian Agencies section.

## KEY TERMS TO KNOW:

**Greenhouse gases (GHG):** GHG emissions are gases such as carbon dioxide (CO<sub>2</sub>) that are released into the atmosphere through your business processes, either directly (e.g. from a car using fuel) or indirectly (e.g. from a power station providing electricity). These gases trap heat, warming the planet and changing climates.

**Carbon footprint:** the amount of GHG emissions your business creates. This will depend upon how big your business is and what processes you undertake. For a small and medium-sized enterprises, from 20 to 5,000 tonnes of CO<sub>2</sub> per annum is the common range.

**Offsetting carbon:** the process by which you 'cancel out' carbon emissions resulting from your business processes by funding projects (like tree planting or renewable energy) that reduce GHGs elsewhere.

**Low carbon:** the Australian Competition and Consumer Commission recommends cautious use of this ambiguous term. For the purposes of this Guide, 'low carbon' is taken to mean significantly lower in greenhouse gas emissions than is usually the case for a business, product or process.

**Carbon neutral:** this means reducing your carbon footprint to zero, usually through both behaviour changes and efficiency improvements to reduce CO<sub>2</sub> emissions, and offsetting to cancel out all remaining CO<sub>2</sub> emissions.

**Sustainability:** making sure the social, economic and environmental needs of our community are met and kept healthy for future generations – with business playing an essential role.

**Payback period:** the length of time it takes to get a full financial return on the purchase of equipment or services. Periods of 7-10 years are often acceptable, 3-4 years attractive, and 1-2 years are a 'must-do'.

**CASHING IN ON CARBON IS INTENDED TO PROVIDE YOU WITH:**

- A practical overview of the key actions your business can take to go low carbon;
- Advice on financial savings, environmental impacts and other benefits that your actions can bring;
- Case studies of businesses that have taken action and achieved savings and awards; and
- Links to resources, organisations and government support available in Victoria that can help you.

This Guide is divided into sections covering nine key aspects of your business, each with two or three actions you can take. Actions commonly offer basic and advanced tools to help businesses of any level of capacity or interest. Each action comes with a set of links to resources, organisations and government policies that can help you find expert services or further information.

**MEET THE NEEDS OF YOUR BUSINESS**

This Guide is designed so that it can be useful in any way that works for you:

- Businesses looking for some quick wins can refer to the box to the right to skip ahead to sections in this Guide that are of key interest.
- Businesses with an interest in a more comprehensive approach to cutting carbon emissions are advised to work through the strategic approach outlined below.

**THE STRATEGIC APPROACH**

The step-wise cycle on the following page (Figure 1) shows how to approach cutting carbon in a strategic way using the sections found within this Guide.

Earlier sections of this Guide will be more important at the beginning of the stepwise process, but be aware that this Guide’s sections are not entirely sequential. You may want to read through this Guide first and then go back and draw up an action list according to each step, picking out advice that matches your business needs.

**IMPLEMENT SOME QUICK WINS**

- **Have staff look through this Guide for you**
- **Start with the Top 7 actions below**

Strapped for capacity? Daunted by the size of this document? Don’t feel put off – here are the Top 7 actions that all businesses should consider:

- 1. BUILD A LOW CARBON CULTURE: JUMP TO PAGE 9**
- 2. GET A BUILDING EFFICIENCY ASSESSMENT: JUMP TO PAGE 13**
- 3. GET A PROCESS EFFICIENCY ASSESSMENT (MANUFACTURERS): JUMP TO PAGE 18**
- 4. PURCHASE GREENPOWER: JUMP TO PAGE 22**
- 5. CONDUCT MEETINGS REMOTELY: JUMP TO PAGE 25**
- 6. ENCOURAGE GREEN COMMUTING: JUMP TO PAGE 26**
- 7. OFFSET YOUR EMISSIONS: JUMP TO PAGE 31**

High-impact actions are possible for even the busiest of businesses – just take them one at a time.



**USE YOUR EARLY WINS TO FINANCE LONGER TERMS GOALS**

After identifying a set of high-priority actions, an effective strategy is to implement opportunities that have a low up-front cost and rapid payback – the ‘low-hanging fruit’ – at the same time as longer-term commitments. This will help bring your overall payback time down as your savings from the easy wins can be reinvested to finance further, more extensive improvements. By taking forward a range of measures at a time you save also effort in planning and boost your achievements. For businesses interested in a more detailed analysis of payback periods, the EPA offers advice and equations for [Calculating Payback Periods](#) of equipment upgrades.



**START  
HERE**

**LAY THE FOUNDATIONS:**

Build an understanding of why your emissions are important, how cutting them can be a win-win for your business, and develop internal processes and expertise to serve as ongoing support for later actions.

The **Organisational Culture** section will help you secure management support and make the most out of your staff at each step.



**Figure 1**  
**A strategic approach to cutting carbon using the sections found within this Guide**

# ORGANISATIONAL CULTURE

The opportunity available in harnessing the enthusiasm and expertise of your staff makes engaging them the critical first step in going low carbon – and plays an essential ongoing role in ensuring the success of all future steps. This section offers guidance on two key actions:

- 1. BUILD THE FOUNDATIONS FOR A LOW CARBON CULTURE**
- 2. DEVELOP MANAGEMENT PROCESSES AND INTERNAL EXPERTISE**



## 1. BUILD THE FOUNDATIONS FOR A LOW CARBON CULTURE

The following principles can help you to develop and maintain staff engagement in the process of becoming a low carbon business :

➤ **DEVELOP YOUR COMMITMENT:** Build commitment to going low carbon at the management level of the business. Read about the advantages of going low carbon in the 'Introduction' of this Guide and read case studies to develop a sense of how going low carbon fits into the broader vision for the business.

➤ **INTRODUCE IT TO EMPLOYEES:** As you develop broad goals, introduce them to your employees, remembering that enthusiasm and commitment at the management level is contagious. Involve employees in brainstorming and have them read this Guide to gather good ideas and build engagement.

➤ **APPOINT A CHAMPION:** Select a respected staff member who shows strong motivation on sustainability issues and exhibits leadership skills, and delegates responsibility to identify opportunities and manage implementation. Make sure you provide sufficient resources.

➤ **INVOLVE THE RIGHT STAFF WITH THE RIGHT TASKS:** Alert and involve staff whose expertise will be needed in the process – for example, building efficiency improvements will need input from your building manager; finance managers can handle calculations of paybacks; your human resources staff will need to be aware of training and staff KPI changes.

➤ **BUILD AND MAINTAIN MOMENTUM:** Start by implementing some quick wins to build momentum and test your management processes. Use this Guide to select these actions – behaviour changes and building/manufacturing efficiency projects are an excellent way to begin.

➤ **INTEGRATE INTO BUSINESS PROCESSES:** Work with management, your champion and staff to integrate low carbon strategies into procurement policies and other decision-making processes. Regularly invite staff perspectives on the integration of low carbon thinking into business processes to maximise their participation and investment in the change.

➤ **CELEBRATE AND REWARD SUCCESS:** Celebrate successes internally and share your achievements with your staff. Reward leadership from your champions and other staff, and integrate success on low carbon measures into staff KPIs. Keep up the momentum by introducing your next ambitious carbon-cutting plan.

### TOP TIP

Find more detailed advice and information in Ai Group's [Energy Saving Culture factsheet](#) and Sustainability Victoria's [guide to Communicating to Your Staff](#)

### CASE STUDY:

#### BUILDING A LOW CARBON CULTURE AT THE FERGUSON PLARRE BAKERY

Ralph Plarre brought his enthusiasm for sustainability to the family business in 2000, when awareness of carbon emissions was still relatively low in business. Building staff commitment to sustainability was an essential part of Ralph's strategy:

"What is most important is to have the CEO fully invested in the process from the very beginning," says Steve Plarre, co-CEO of Ferguson Plarre. "Change begins at the top."

Over several years, Ferguson Plarre developed a number of ways to integrate sustainability into business processes and performance indicators, including:

- Staff involvement: sustainability reports on notice boards; green tips on staff payslips; appointing champions; granting a 'Green Machine' award to recognise leading staff; creating an influential environmental steering committee;
- Third party engagement: hiring a consultant to help train staff and design an environmental management system; and
- Integration into business decision-making: in procurement, manufacturing, waste management and building design.

Today, the low carbon culture has developed a momentum of its own. When Steve Plarre walks the factory floor, staff enthusiastically tell him about the changes they've made in their own lives – from installing water tanks to buying GreenPower. "I know that if I left for a year, the process would keep moving along without me," Steve says.

Ferguson Plarre's hard work has been richly rewarded: the new sustainable bakery saves \$250,000-300,000 each year in electricity costs (a one-year payback on the initial investment); the company has received as much as \$150,000 in free advertising through media coverage of its sustainability achievements; and by making environmental responsibility a key consideration in the business, Ferguson Plarre has noticed a positive impact on staff culture throughout all aspects of the business.

**"Change begins at the top."**

Steve Plarre, co-CEO of Ferguson Plarre

## 2. DEVELOP MANAGEMENT PROCESSES AND INTERNAL EXPERTISE

Engaging third parties to develop your internal processes and train your staff can be especially valuable during the early stages of building a low carbon culture in your organisation. Both consultants and short courses can provide you with strategies that have been developed through years of learning within other businesses – giving you a strong foundation and reducing the time burden of getting started.

Medium to large businesses particularly may opt to develop enough internal expertise to identify opportunities and handle implementation without third party assistance - but this will be a longer-term investment.

### WHAT PAYBACK RATE?

Payback for low-cost actions, such as appointing and resourcing a carbon champion or training your staff in simple low carbon behaviours can be almost immediate.

Payback times for investing in courses for your staff will vary from business to business and so are difficult to predict. As sustainability increasingly becomes a key concern of businesses and consumers, staff with knowledge in the area can become an asset.

### ACTIONS:

Train your staff with one of a range of courses offered by Ai Group, VECCI and Sustainability Victoria (see over).

The [Melbourne Carbon Market Guide](#) can help you find both consultants and training courses. You can also look on the 'consultant' page in [The Green Directory](#).

Integrate the top five behaviour changes (see right) into staff training and induction.

### TOP FIVE BEHAVIOUR CHANGES

Consider giving your sustainability champion the responsibility of promoting and rewarding these behaviour changes in your workplace.

- **Switch lighting and equipment off:** flick switches off when equipment is not in use (especially overnight). Over 40 per cent of the energy used by computer equipment, for example, can arise from standby – turn equipment off at the wall rather than keeping it in sleep-mode.
- **Reset the thermostat:** indoor temperatures are typically set to 20-21°C year round in Victoria. Set air conditioners to 24°C in summer or 25°C in northern Victoria. Just one or two degrees has a large impact on energy savings.
- **Use windows wisely:** open them on a warm day – a fresh breeze can not only cool you, but can provide healthier air to breathe. On the other hand, close all windows if you are using either a heater or an air conditioner.
- **Reduce, reuse, repair, recycle:** keep recycle bins clearly visible and labelled, and encourage their use. Maintain equipment so that it operates efficiently and lasts longer.
- **Walk, cycle or catch public transport to work:** or at the minimum, carpool. Offer incentives to staff – look at the 'Employee Travel' section of this Guide for ideas.



### TOP TIP

Sustainability Victoria's free [5-Star Sustainability website](#) is an excellent tool for helping you identify where your business is up to in the process of developing management tools for staff engagement.

More than **50%** of the most profitable carbon savings available to a business can be unlocked simply by changing staff behaviour.<sup>7</sup>



**MAKING ENERGY AND WATER SAVINGS TANGIBLE**

Making energy and water savings tangible can bring natural changes in staff behaviour. For example, placing a graph of your monthly energy use near the most-used switches can make the link between the two clear, providing feedback as you achieve improvements in energy use. Similarly, businesses have had success in reducing water bills by placing graphs of monthly water usage above sinks.

[Sustainability Victoria](#) and VECCI's [What Can I Do Right Now](#) provide handy signs you can print and post next to light and equipment switches.

**RESOURCES:  
COURSES AVAILABLE**

**AI GROUP ENVIRONMENT TRAINING:**

- Compliance with Environmental Obligations
- Practical Environmental Management
- Developing, Implementing and Improving your Environmental Management System
- Ai Group also offers on-site training and tailored sessions to meet your needs

Find these courses and a list of upcoming seminars and events, such as environmental solutions forums, at the [Ai Group website](#).

**VECCI BUSINESS SUSTAINABILITY LEARNING:**

- Carbon Management 101 briefing
- Creative Thinking and Sustainability workshop
- Sustainability in Action workshop
- Green Office briefing
- VECCI also offers on-site training and tailored sessions

Find these courses at the [VECCI website](#).

**SUSTAINABILITY VICTORIA COURSES:**

Sustainability Victoria also offers courses focused on developing [green trades skills](#).



**TAKING MANAGEMENT ON THE LOW CARBON JOURNEY**

Are you an employee interested in convincing management of the merits of low carbon projects? This Ai Group guide to [winning over your executive](#) may be exactly what you need. It includes tips on how to:

- Identify the key people you need to influence in your business – from senior management, financial controllers or human resources;
- Make an evaluation of the low carbon project you are considering to decide whether it is appropriate at this time, and consider case studies of similar organisations;
- Prepare your business case, a timeframe for implementation and strategies for dealing with potential risks; and
- Leverage the influence and expertise of your colleagues, the broader workforce within your organisation and any other interested parties.

# ENERGY-SMART BUILDINGS

Buildings are responsible for 23 per cent of carbon emissions in Victoria.<sup>8</sup> The total utility costs associated with them are, on average, from 20 to 40 per cent of business profits. Taking simple steps to reduce energy consumption can increase the average business' profits by 5 or even 10 per cent.<sup>9</sup>

Here we'll show you two options for getting started – both of which involve an assessment step (measuring your carbon emissions) followed by the implementation of improvements (such as energy-efficient lighting):

## **1. GUIDED DO-IT-YOURSELF ENERGY ASSESSMENT AND IMPLEMENTATION**

## **2. CALL AN ENERGY SERVICES EXPERT**

## 1. GUIDED DO-IT-YOURSELF ENERGY AUDIT AND IMPLEMENTATION

The do-it-yourself option is suited to businesses that want to cut their energy bills and carbon emissions, but spend too little on energy to form a contract with an energy services company (e.g. less than \$20-30,000 per annum). There are still many programs and resources available to help guide businesses with smaller energy spends through the do-it-yourself process – such as a step-by-step guidance program like VECCI's 'Grow Me The Money' and the City of Melbourne's 'City Switch'.

### WHAT PAYBACK RATE?

Payback will vary widely according to your business type and your processes. Energy efficiency is, however, generally regarded as one of the best payback options for going low carbon.

The average small and medium-sized enterprise working with VECCI's Grow Me The Money program, which includes an assisted DIY audit process, has saved over \$7020 in energy and water costs since starting the program - while the basic program costs just \$109 for one year.

In order to reap the full benefits, you need internal commitment to follow through on any information that you gather – this will be easier if you keep in mind the principles outlined in the 'Organisational Culture' section of this Guide.

### ACTIONS:

#### Contact [VECCI](#) to

- Participate in [Grow Me The Money](#)
- Get an Environmental Opportunity Assessment
- Get a Carbon Footprint Assessment

#### Contact [Ai Group](#) to

- Get a Sustainability Assessment

Use the comprehensive package of tools and information in the DIY resource box (see over), organised according to your capacity and interest from basic to advanced tools.

### CASE STUDY:

#### ENERGY-SMART UPGRADES AT THE HORSHAM HOUSE GUESTHOUSE

In mid-2007, Chris and Dallas Pittock took on the challenge of bringing their Federation-era guesthouse, Horsham House, up to high modern standards of efficiency.

After an initial self-auditing process, assisted by VECCI's Grow Me The Money program, Chris and Dallas performed a range of retrofits on the building and gave careful thought to ways of changing guest behaviour. Examples of their actions include upgrading to energy-efficient compact fluorescents, removing excessive lighting, installing a heat-recovery ventilation system, an efficient hot water system and ultra-efficient washing machines.

Horsham House achieved a 28 per cent reduction in electricity use, saving over 29.8 MWh, \$5000 and 40 tonnes of CO<sub>2</sub> since 2006. They also reduced their water use by 63 per cent, saving another \$2000. These savings have seen a full payback come in little more than 3 years.

"The return on investment has been exceptional: I honestly never thought I would see that," says Chris Pittock. "And we are finding our customers are more likely to return when they are aware of our sustainable business practices."

Horsham House was one of the Grow Me The Money Awards for Results winners in September 2010 – an accolade that saw Horsham House receive a cheque to spend on sustainability actions and publicity in various publications including The Age. A recent shortlisting in the Premier's 2010 Sustainability Awards has cemented Horsham House's position as a low carbon leader within the bed and breakfast industry.

**“The return on investment has been exceptional. I honestly never thought I would see that.”**

Chris Pittock, owner of Horsham House

**RESOURCES:****DO-IT-YOURSELF ASSESSMENT AND IMPLEMENTATION****Starter tools**

- Future Climate's [Carbon Calculator](#) will help you perform a self-assessment with your utility bills.
- See which of the Top 12 Building Upgrades listed on page 18 apply to your building.
- The Victorian Government's [Climate Communities website](#) acts as a gateway to valuable content from a range of government agencies and other organisations, complete with guides, case studies and experts to contact.
- VECCI's 10 [climate change fact sheets](#) include sector-specific information for small and medium-sized enterprise in tourism, accommodation, restaurants, transport, retail and wholesale, business and professional services and manufacturing.
- Read Ai Group's 'Saving Energy in Small and Medium Enterprises' and other relevant [factsheets](#).

**Advanced tools**

- The EPA's [Carbon Management Principles](#) provide a high-detail step-wise approach to measuring and then reducing your carbon emissions, appropriate for larger businesses or small and medium-sized enterprise with a keen interest in rigorous carbon management.

**2. CALL AN ENERGY SERVICES EXPERT:**

For businesses with a larger energy spend (e.g. more than \$20-30,000 per annum), a wider range of energy services are available - though there is no one-size-fits-all solution. Contact the Energy Efficiency Council for advice and a directory of high-quality energy service companies (ESCOs), or industry associations for advice on energy services in your sector. There are two common types of solution:

**Energy assessment:** Your current levels of energy use are measured and specific efficiency opportunities within your building are highlighted. To be effective, an assessment requires strong commitment from management to follow through on the energy information collected - too often this information goes to waste.

**Integrated assessment and implementation:** An ESCO or other third party is contracted to conduct an energy assessment, and then implement energy efficiency measures suited to your business. Typically these contracts are structured so that you pay an up-front fee that covers the ESCO's work and your energy savings will pay back this investment over time.

- You can specify whatever payback period is acceptable for you, be it 3 years or 15 years.
- Under energy performance contracts, for businesses with an energy spend above \$250,000 pa, savings can be guaranteed - though certainty can increase costs.

Whatever option you choose, do not expect to entirely out-source your energy efficiency. Management level must stay committed and willing to contribute to progress.

**WHAT PAYBACK RATE?**

Typically, integrated implementation contracts will pay back your investment over 3 to 7 years - but you can specify to your contractor what payback time is acceptable.

**ACTIONS:**

Call the [Energy Efficiency Council](#) to ask for more information on services available, and to be recommended high-standard ESCOs in Victoria. The Energy Efficiency Council also provides [best-practice guides](#) on how to hire the right ESCO and design the right scheme for your business.

[VECCI](#) or [Ai Group](#) offer auditing services tailored to your business needs, and their consultants can help you undertake further improvements.

**CHALLENGE:  
WORKING  
WITH THE  
LANDLORD****MAKING YOUR LEASED OFFICE ENERGY-SMART**

Obtaining electricity consumption data for leased office space often poses a challenge. If you are a tenant and your individual space is not metered, it is likely that you are paying a flat rent that includes energy costs. This will make it difficult to calculate the carbon emissions associated with your electricity and gas usage.

Moreover, it could also be difficult to make significant improvements to building systems, since these often serve multiple tenants.

The [City Switch](#) tenant program, run in Victoria by Sustainability Victoria and the cities of Melbourne and Port Phillip, can help. The program works with office tenants committed to improving energy efficiency to make a positive impact on climate change.

**TOP TIP**

**Get competitive quotes from three ESCOs, especially where your savings are guaranteed - this will ensure you achieve the best possible outcome for what you pay.**

**TOP TIP**

**Before signing an energy services contract, make sure you ask your ESCO, industry association or consultant for a case study of a business similar to yours.**

EFFICIENCY UPGRADE	DESCRIPTION	RESOURCE	
EQUIPMENT	<b>Energy Star products</b>	Energy Star is an international standard for a range of products from office equipment to household appliances and air conditioners. The ECO-Buy service can help you find products like these.	The <a href="#">ENERGY STAR</a> website can provide you with more information on the standard. See <a href="#">ECO-Buy</a> and the <a href="#">Eco-Smart Electricians</a> website for listings of green products and their suppliers.
	<b>LCD computer screens</b>	These use around half the energy of traditional cathode ray tube monitors.	Any good computer supplier.
	<b>Laptops</b>	Laptops use up to 90 per cent less energy than a standard desktop computer.	Any good computer supplier.
LIGHTING	<b>Compact fluorescents and tube fluorescents</b>	Upgrading your lights to fluorescents is cheap, easy, and brings a fast payback. In tube lighting, T5s are the most efficient. LEDs and halogens are also excellent in some applications.	Any good lighting or hardware store. The <a href="#">Eco-Smart Electricians</a> website can help you find good advice.
	<b>Motion sensors and programmed switch-off</b>	Install master switches that are timed to turn off all electricity to the office overnight. Occupancy sensors switch off artificial lighting when no one is present. This is particularly effective in transient or intermittent spaces such as hallways, parking garages, conference rooms, guest rooms and bathrooms.	Find an electrician through the <a href="#">Eco-Smart Electricians</a> website, or call a lighting consultant for help on how to utilise smart controls for lighting in your business. The <a href="#">Energy Efficiency Council</a> can also put you in touch with the right person.
	<b>Task lighting</b>	Lighting systems that illuminate specific tasks or work areas allows reductions in overhead lighting density, reducing the amount of electricity used in lighting.	Any good lighting or hardware store. Also see the <a href="#">Eco-Smart Electricians</a> website. You may need to discuss lighting changes with your building manager.
HVAC	<b>Upgrade HVAC motors</b>	Modern HVAC motors are much more efficient. Significant savings may be realised by replacing older models with new, premium-efficiency or variable speed motors.	See the <a href="#">Eco-Smart Electricians</a> website, or talk to <a href="#">AIRAH</a> or <a href="#">Sustainability Victoria</a> for advice.
	<b>Pipe and duct insulation</b>	This reduces the heat lost or gained within the HVAC system, improving energy efficiency and reducing bills – typically with excellent payback.	See the <a href="#">Eco-Smart Electricians</a> website, or talk to <a href="#">AIRAH</a> or <a href="#">Sustainability Victoria</a> for advice.
	<b>Building management system</b>	A BMS is a software program that interacts directly with building systems to monitor and control the environment, optimising efficiency. These systems are better suited to situations where a large business owns and/or operates a whole building.	Talk to the <a href="#">Energy Efficiency Council</a> for advice on an energy services company appropriate for your business. The <a href="#">Eco-Smart Electricians</a> website can also help.
BUILDING ENVELOPE	<b>External shading</b>	In the Victorian environment, exposure to sunlight can increase energy use associated with building cooling. The installation of overhangs, shading devices and light coloured exteriors can reduce the amount of energy needed to cool a space.	Look in <a href="#">EcoSpecifier</a> for shading products available. Contact an insulator or glazier. Otherwise, an energy efficiency consultant can help you identify a solution.
	<b>Wall insulation</b>	Improving the level of insulation within wall and roof cavities can reduce heat loss in the winter, thus reducing the need for heating and keeping cool in summer.	Look in <a href="#">EcoSpecifier</a> for insulation products available. Contact an insulator relevant to your building type, or an energy efficiency consultant.
	<b>Limit air infiltration</b>	Older buildings are prone to air leakage, placing a greater load on the HVAC systems. A building pressure test can help identify any serious issues in this area and can usually be rectified with a standard sealant or caulking.	Close doors and windows, and call a relevant tradesperson if gaps are causing air leakage. Contact an insulator relevant to your building type, or an energy efficiency consultant.

# FACTORY FLOOR

According to a Carbon Down study<sup>10</sup> manufacturers have, on average, one of the largest carbon footprints of any business type - primarily because many manufacturers are heavy electricity users with significant material inputs. On the plus side, this gives excellent scope for reducing costs and increasing efficiency through 'lean and green' manufacturing that cuts energy use, material inputs, waste and carbon emissions. Actions you can take to reach your efficiency potential are:

- 1. GUIDED DO-IT-YOURSELF ASSESSMENT AND IMPLEMENTATION**
- 2. CALL AN INDUSTRY EFFICIENCY SPECIALIST**



## 1. GUIDED DO-IT-YOURSELF ASSESSMENT WITH IMPLEMENTATION

The do-it-yourself option is suited to businesses that want to cut energy bills and carbon emissions, but spend too little on energy (e.g. less than \$20-30,000 per annum) to contract an efficiency specialist. A number of programs exist to help guide you through the process – such as VECCI’s Grow Me The Money or the EPA’s Energy Resource Efficiency Plans program.

When assessing your manufacturing process, there are a few key principles to keep in mind:

- **Assess total systems** where possible, detailing energy use for each part of the system;

- **Prioritise areas of possible inefficiency**, in the context of both energy intensity (energy used per product or per unit output) and total consumption;
- **Be mindful of return-on-investment**, taking into account equipment life expectancy and refurbishment plans;
- **Consider replacing large, centralised systems** with decentralised ones, or vice versa; and
- **Reduce the number of thermodynamic steps** in systems, such as steam to warm water.

### WHAT PAYBACK RATE?

Payback times vary considerably across different businesses and processes. Ai Group provides industry-specific payback guidelines on its website, with most paybacks falling in the 1–5 year range. See the manufacturing resources (over) for a complete list.

Businesses using the EPA’s Energy & Greenhouse Management Toolkit as part of EPA programs achieved annual savings of \$38.2 million and 1.23 million tonnes of CO<sub>2</sub>. Their payback time? An average of 20 months.

### ACTIONS:

**Basic** Use Future Climate’s [Carbon Calculator](#) for a footprint assessment, and follow up with the manufacturing upgrade resources (over). VECCI’s [Grow Me The Money](#) can also provide valuable guidance to small and medium-sized enterprise.

**Advanced** Use Ai Group’s production-line [waste assessment and management tool](#), or contact the EPA about [joining the Energy Resource Efficiency Plans](#) program.

### CASE STUDY:

#### SOUTH PACIFIC LAUNDRY, MELBOURNE’S HIGH-EFFICIENCY INDUSTRIAL LAUNDRY

South Pacific Laundry is an industrial-scale laundry in East Brunswick with 98 staff, serving the needs of hotels, restaurants and other hospitality establishments throughout Melbourne.

In response to growing business, South Pacific Laundry moved to a larger site in East Brunswick in 2005. The move gave them the impetus to upgrade their equipment, training and operating procedures, meeting South Pacific CEO Mr Choon Ming Tang’s twin goals of raising process efficiency and reducing the business’ carbon footprint.

Working with Sustainability Victoria, South Pacific Laundry implemented several cutting-edge energy saving technologies and strategies, including:

- Installing the Ecolab Energy Optimiser, a technology that recovers heat from discharged hot water, which cuts linen drying time and reduces energy used per cycle;
- Installing humidity sensors to prevent overuse of gas through over-drying linen;
- Installing variable speed drives on boiler fans and air compressors;
- Upgrading lighting efficiency, including more use of task lighting; and
- Staff training in energy efficiency.

“The saving we’ve achieved is tremendous,” says Mr Tang. “We have cut energy use by more than half, from 14 MJ/kg to 5 MJ/kg.”

In addition to saving 1,200 tonnes of CO<sub>2</sub> emissions, annual savings in energy and water bills total \$250,000 – giving a 4 year return-on-investment. Beyond these savings, Mr Tang has found that his customers are impressed with the quality improvements that have come with the new, regulated drying process.

“We took a risk, and we succeeded – so I am very proud.”

### TOP TIP

To find sustainable manufacturing equipment, materials and their providers throughout Victoria, go to Sustainability Victoria’s ResourceSmart Sustainable Manufacturing website.

**RESOURCES:****COMMON MANUFACTURING UPGRADES**

These detailed 'Best-Practice Guides' from Sustainability Victoria can guide you through upgrading some of the most common types of manufacturing equipment:

1. **Refrigerators (cooling, chilling, freezing):** improve insulation, repair leaks, review controls, and select high-efficiency components.
2. **Hot water and steam systems:** improve insulation, repair leaks, capture condensate, and upgrade control systems.
3. **Compressed air:** seal leaks, secure valves, upgrade your compressor and review air demand.
4. **Lighting:** upgrade your lights, use them only when needed, and use task lighting to suit your processes.
5. **Pumping:** assess your pumping system, review flow-rate controls, adjust motors and optimise piping.
6. **Co-generation:** capture waste heat from generation facilities to make significant energy savings.
7. **Variable speed drives and high-efficiency motors:** motor energy savings of 20-50 per cent are often possible through retrofitting variable speed drives.

The EPA and Sustainability Victoria's [Energy & Greenhouse Management Toolkit](#) (especially Module 5) can provide further guidance on implementing these upgrades.

Ai Group offers energy-saving guides across various industries, which include measures of cost and payback. These cover:

- [Industrial laundries](#)
- [Metal manufacturing](#)
- [Printing](#)
- [Dairy processing](#)
- [Textiles manufacturing](#)
- [Automotive components manufacturing](#)
- [Beverage manufacturing](#)
- [Beverage and fruit processing](#)
- [Confectionery manufacturing](#)
- [Abattoir and meat processing](#)

**2. CALL AN INDUSTRY EFFICIENCY SPECIALIST**

Businesses with higher energy spends (e.g. more than \$20-30,000 per annum) may be able to contract an industry efficiency specialist to help implement lean manufacturing processes and upgrades. Call the EEC, the EPA or your industry association for advice on what kind of expert will be best for your business.

To extract the full value from assessments, you must have internal commitment to follow-through and implement upgrades. A more effective option is to establish a contract with an expert consultant or energy services company that combines both assessment and implementation. Such contracts tend to provide assistance that is more practical and tailored to your needs.

**WHAT PAYBACK RATE?**

Payback times vary considerably across different businesses and processes. Typically, assessment with implementation contracts will pay back your investment over 2 to 7 years – but you can specify to your contractor what payback time is acceptable.

**ACTIONS:**

Find an efficiency specialist:

- By contacting the [Energy Efficiency Council](#).
- At [Ai Group](#) or your relevant industry association.
- In EPA's list of [appointed industrial auditors](#).

**TOP TIP**

**When you are replacing aged equipment setups or moving locations, this is the best time to bring efficiency specialists in to help design and upgrade new systems – energy savings of over 50 per cent are often possible.**

**USING THE RIGHT SELECTION CRITERIA**

When calling for proposals from external energy efficiency specialists, manufacturers should consider including the following important elements in selection criteria:

- Capacity to prepare an accurate end-use breakdown of energy consumption;
- Ability to scope and estimate costs of practical energy efficiency measures;
- Capacity and commitment to supervise the implementation of energy efficiency measures and verify energy savings once implemented;

- Three references prepared to accept inquiries concerning performance in respect of the above criteria; and
- Evidence of professional indemnity insurance to underwrite the risks associated with the above criteria.

Note that not all these elements may be available if your energy spend is too low to make implementation and verification attractive to efficiency specialists.

Call the [Energy Efficiency Council](#) for further advice.

**SELECTING AN EFFICIENCY SPECIALIST**

**EPA AND AI GROUP'S SUSTAINABILITY COVENANT**

The EPA and Ai Group have formed a [Sustainability Covenant](#), aimed at helping businesses put in place sustainable practices, reduce operating costs and improve environmental performance. The Covenant is a public commitment by Ai Group and EPA to work together to contribute to a more sustainable Victoria.

Funding of \$3 million has been made available for 2009-2012 for projects that demonstrate clear resource efficiency and waste reduction outcomes and contribute to capacity building within your

company and/or supply chain, industry sector or geographic location.

Projects are funded on a rolling basis, and there is no predetermined limit of support. Check out the case studies on the website for an idea of the projects that have been funded to date.

**GET SUPPORT FOR YOUR INNOVATION**



**\$3 million**  
has been made available for  
projects that demonstrate  
resource efficiency

# SOURCING CLEAN ENERGY

Across businesses surveyed by Carbon Down, electricity is the greatest source of carbon emissions – accounting for 70 per cent of the average business carbon footprint.<sup>11</sup> Alongside efficiency measures, sourcing renewable energy can help you dramatically reduce your carbon footprint – and allows you to harness the power of renewable energy as a marketing strategy. Here are three key actions you can take:

- 1. BUY GREENPOWER**
- 2. GET ROOF-TOP SOLAR POWER**
- 3. GET SOLAR HOT WATER**



## 1. BUY GREENPOWER

When you purchase GreenPower, you pay a small premium that electricity retailers use to fund renewable energy projects.

Switching to GreenPower is simple, immediate, relatively inexpensive and can completely eliminate your electricity-related emissions – and will let you use the GreenPower logo in promotions.



### WHAT DOES IT COST?

You can buy anything from 10 per cent to 100 per cent GreenPower, so the cost varies. 100 per cent GreenPower typically costs 6 to 8 c/kWh more than regular electricity (increasing your electricity bill by 30-50 per cent), so unlike the renewable energy options below it is not likely to end up saving you money.

Carbon Down's GreenPower program can help you get the best possible GreenPower price, and in some cases has actually saved businesses money by switching them to as much as 30 per cent GreenPower.

### ACTIONS:

#### Get GreenPower

- Carbon Down's 'Choose GreenPower' program can give you a [free GreenPower cost-comparison](#) and help you get a good deal.
- Sustainability Victoria's ResourceSmart website gives a list of [accredited GreenPower providers](#).

### CASE STUDY:

#### Impact Digital's solar-powered printing

"I was tired of hearing people just talking about climate change so I started taking action," says Tony Parker, CEO of Impact Digital, a Brunswick printing service. And act he did, with Impact Digital installing:

- A 50 kW solar photovoltaic array, generating enough electricity to power five homes;
- A solar hot water system, meeting 100 per cent of Impact Digital's hot water needs;
- Energy efficient cooling systems that operate passively without cost; and
- Energy efficient lighting, using the hyper-efficient T5 fluorescent tube.

Finally, Tony offsets Impact Digital's remaining emissions by tree-planting through Carbon Conscious Ltd.

A 50 kW solar array may cost around \$200,000, but with solar panels lasting for 25 years, Tony says that the investment in environmental responsibility is well worth the price.

Moreover, Impact Digital now has a unique selling point: Solar Powered Digital Printing. This angle has become central to business communications: staff wear 'We Give A Pixel' t-shirts; the website promotes their 100 per cent carbon-neutral status; products are Forest Stewardship Council accredited; and their leadership role has been celebrated through Moreland City Council's 'Zero Carbon Moreland' program.

The upgrades have been great for Impact Digital's clients, because "they've been getting pressured from their customers to source sustainable supplies," says Tony. "It flows right through the supply chain."

**Carbon Down's GreenPower program has actually saved businesses money by switching them to 30% GreenPower.**

## 2. GET ROOF-TOP SOLAR POWER

Roof-top solar photovoltaic systems come with a high upfront price-tag, but generous feed-in tariffs mean you can sell the electricity you generate back

### WHAT PAYBACK RATE?

Combining the Victorian feed-in tariff with upfront rebates available from the Australian Government, payback periods often range from 7-15 years. Keep in mind that a solar photovoltaic system should come with a 25-year warranty.

You can only sell the electricity you do not use, so the more your solar photovoltaics produce power in excess of your needs, the faster your payback will be.

to the grid at an attractive rate. This can make solar photovoltaic systems a worthy long-term investment.

### ACTIONS:

Find accredited solar power installers at [Sustainability Victoria](#).

Read the 'Government Support' box (see right) for more information on rebates and the feed-in tariff.

## 3. GET A SOLAR HOT WATER SYSTEM

Solar hot water is a well-established technology that is highly suited to the Australian environment. The systems come in two varieties: active, where water is pumped through the collector pipes, and passive, where the heating of the water causes it to flow into

the hot water tank by itself. Hot water systems allow you to use far less gas or electricity to keep your water hot, bringing cuts in carbon emissions and substantial savings in utility bills.

### WHAT PAYBACK RATE?

Payback is improved by rebates available from the Victorian Government and the Australian Government, and will depend upon what system you are purchasing and what system you are replacing. It is often between 4-10 years and the installer can give an estimate based on your conditions.

### ACTIONS:

Find Sustainability Victoria's [list of approved small-scale solar hot water systems](#) or call [Sustainability Victoria](#) for more information on larger systems.

Find out what rebates apply to you in the 'Government Support' box (see right).

## GOVERNMENT SUPPORT: SMALL-SCALE ROOF-TOP RENEWABLE ENERGY

### Solar Photovoltaics

Solar photovoltaics systems are covered by an up-front rebate, through creating 'Renewable Energy Certificates' (RECs), that can reach up to \$8000. The rebate is especially favourable for the first 1.5 kW purchased. Read more in the Government Support section on pages 43-44, and use the [Solar Photovoltaics REC Registry Calculator](#) to find out how many RECs your system could create (remembering that each REC is worth from \$30-50).

The Victorian Government 'feed-in tariff' program means you could potentially sell thousands of dollars of solar power each year. It is critical to understand that you can only sell the electricity your business doesn't use – so the electricity demands of your business will significantly affect your payback scenario. Read the Department of Primary Industries' [Step-by-step guide to receiving the Premium Solar Feed-in Tariff](#),

### Solar Hot Water

Solar hot water systems also create RECs, and will soon be eligible for other rebates at a state level. These can save hundreds of dollars on a small system, or tens of thousands of dollars on a large one. Read more in the Government Support section on pages 43-44, and use the [Solar Hot Water REC Registry Calculator](#) to find out how many RECs your system could create (remembering that each REC is worth from \$30-50).

## TOP TIP

**Every action you take to improve your energy efficiency will make sourcing renewable energy more economically attractive. You will need to buy less GreenPower, or will be able to sell more of the electricity you generate.**

# REDUCING TRAVEL EMISSIONS

VECCI's Carbon Down survey identified travel as the second largest source of small and medium-sized enterprise emissions, and particularly significant for distribution, construction and flight-dependent service industries.<sup>12</sup> Purchasing fuel efficient or hybrid/electric vehicles and becoming less reliant on flights can save money and emissions today – and protect your business from rising fuel prices tomorrow. Three things you can do:

- 1. USE VIDEO CONFERENCING AND CONDUCT MEETINGS REMOTELY**
- 2. ENCOURAGE GREEN COMMUTING**
- 3. SWITCH TO FUEL-EFFICIENT OR HYBRID/ELECTRIC VEHICLES**



## 1. USE VIDEO-CONFERENCING AND CONDUCT MEETINGS REMOTELY

A recent Intercall survey asked individuals what their companies were doing to cut their carbon footprints, and the top response, at 66 per cent, was providing conferencing tools to cut back on travel.<sup>13</sup> It's little wonder why: video-conferencing systems make it easy to do more with less, allowing regular contact with colleagues and clients on short notice with low demands on time and money – and a very low environmental impact.

Video-conferencing technology has come a long way in recent years: new technologies allow parties to view documents on the conference table and 'smart-boards'

allow participants to record notes and actions at the touch of a button. Systems with different levels of complexity will suit different business types and sizes:

- Basic systems may use a standard computer, webcam, microphone, and free or low-cost software.
- Advanced systems, such as CISCO's Telepresence, may have dedicated hardware with high definition sound and video, improved reliability, and collaborative working tools.

### WHAT PAYBACK RATE?

Video-conferencing prices range from the free Skype service, low-cost WebEx services, to \$300,000 'telepresence' systems.

Given their low cost, Skype and WebEx systems typically have almost immediate payback.

CISCO's experiences with big business suggests that advanced video-conferencing systems typically provide payback within 6-14 months of purchase,<sup>14</sup> if they can supplant constant expenditure on flights and hotels.

### ACTIONS:

Install or purchase a video-conferencing system.

**Basic:** [Skype](#) can meet the needs of some small businesses, though many small and medium-sized enterprise find the additional functionality of a [WebEx](#) service (or similar) to be most appropriate.

**Advanced:** Businesses seeking bigger systems can contact video conferencing providers like CISCO, Polycom, Tandberg & Aethra for advice and quotes.

**Advanced video-conferencing systems typically provide payback within 6-14 months of purchase.**

### CASE STUDY:

#### LINFOX'S LOW CARBON DISTRIBUTION SERVICES

Since 2007, Linfox's 'Vision Zero' goal of zero injuries, zero fatalities and zero accidents has included a target of zero net environmental emissions. "We believe strongly that climate change is real, and reducing emissions is the right thing to do," says Sustainability Manager, David McInnes. "And at the end of the day, it's not only good for the environment, it's good for business too."

As a logistics business, 80 per cent of Linfox's emissions come from fuel use in transport. With this in mind, Linfox established its 'Green Fox' transport strategy in 2007, with the goal of cutting its emissions per kilometre by 15 per cent by 2009.

When the deadline arrived, Linfox had cut its emissions -and expenditure on fuel- per kilometre by an impressive 28 per cent. This allowed the business to increase total distance travelled by 21 per cent while still decreasing overall emissions by 14 per cent.

Green Fox has now set an even more ambitious target of 50 per cent cuts in emissions by 2015. The strategy involves:

- Training drivers in fuel-efficient 'eco-driving' practices, such as accelerating gradually and anticipating traffic flows to reduce brake usage;
- Fleet-tracking software to assess how changing transport modes and routes can reduce total fuel use;
- Using biofuels to make Linfox's fuel use cleaner; and
- A yearly auditing process to authenticate its figures.

The low carbon transition has been rewarding, both in meeting the company's goal to contribute to a sustainable future and, with significant cuts in fuel use, also for the bottom line.

"There have been so many opportunities," says David. "Focusing on fuel and energy use has brought so many benefits to the business."

## 2. ENCOURAGE GREEN COMMUTING

Changing your employees' commuting habits can have more positive impacts than you might expect – on employee health, productivity, and transport expenditure, as well as on your business carbon footprint.

Green commuting options include:

- Walking and cycling
- Public transport
- Car pooling

### WHAT PAYBACK RATE?

Green commuting provides immediate and significant savings in almost all circumstances. Walking and cycling are practically free, and can improve staff health and productivity. Public transport is often cheaper than fuelling and maintaining a car, and means less time stuck in traffic jams and more time for relaxing activities such as reading.

### ACTIONS:

- Have staff use Adelaide Metro's [public transport savings calculator](#) – while not Victorian, it indicates the scale of savings possible.
- Develop a [TravelSmart plan](#) for your business, with ideas including: pedometer competitions; providing public transport tickets for work-related travel; and providing an office shower for cyclists.
- Car-sharing, through [Flexicar](#) and [GoGet](#) for example, can help you to avoid unnecessary car purchase.

## 3. SWITCH TO EFFICIENT OR HYBRID/ELECTRIC VEHICLES

Diesels are an affordable low-emissions alternative, and hybrid cars can be even lower-emissions. Compared to Australia's average of 11.5 L of petrol per 100 km for a mid-size car, hybrids can achieve below

4 L of petrol per 100 km. That's three times less fuel bought at the petrol pump – and three times lower carbon emissions.

### WHAT PAYBACK RATE?

In the US, many hybrids repay their initial cost-premium within 3 years and most repay within 5. With demand out-stripping supply, hybrids are currently more expensive in Australia and payback is significantly slower, but this should change over time. A \$100 discount for hybrid car registration provides an additional incentive.

Electric car technology is advancing rapidly and the Victorian Government is undertaking an electric car trial<sup>15</sup> – so watch this space.

### ACTIONS:

- Choose a high-efficiency vehicle using the Federal Government's [Green Vehicle Guide](#).
- If purchasing a hybrid, ask your dealership about your eligibility for the \$100 hybrid registration discount. Read Vincentric's [evaluation of hybrid paybacks](#), but be aware it applies to US hybrid pricing.

### TOP TIP

Before you get started, you may want to measure your transport emissions with [Future Climate's Carbon Calculator](#).

**Fuel-efficient driving practices are easy to learn and can cut the fuel use of your company vehicles by more than 15%**

### RESOURCES:

#### GUIDES TO CLEANER TRAVEL

Fuel-efficient driving practices are easy to learn and can cut the fuel use of your company vehicles by more than 15 per cent<sup>16</sup> – as Linfox's drivers can testify. [VECCI's guide to Transport for small and medium-sized enterprise](#) provides excellent advice for making fuel-efficient driving a part of your standard practice.

The Net Balance [Transport Guide](#) provides a more detailed analysis of business transport options.

# GREENING YOUR SUPPLY CHAIN

More and more businesses are looking beyond their own organisational boundaries when assessing the carbon emissions associated with their products. Major companies like Wal-Mart and Westpac, for example, have introduced environmental checklists that suppliers must now complete if they are to continue providing products.

This section explores how to keep ahead and track your own supply chain emissions. Two major actions you can take are:

## 1. ENGAGE IN LIFE-CYCLE THINKING

## 2. IMPLEMENT STRATEGIES FOR CUTTING SUPPLY CHAIN CARBON



## 1. ENGAGE IN LIFE-CYCLE THINKING

The total carbon footprint of a product includes all emissions at every stage of its life, from the extraction of raw materials to its consumption and disposal. Performing a full life-cycle analysis of a footprint gives a complete breakdown of the carbon emissions and their source at each of these stages.

However, conducting a full life-cycle analysis can be extremely costly, and businesses often file away the resulting information without taking action.

A low-cost, high-level assessment of your product's life-cycle can give you an overview of the savings or carbon emission reductions available, and still provide you practical information you can work with.

### WHAT PAYBACK RATE?

The benefits of life-cycle thinking for your products can be diverse in nature and variable in size. For example:

- Reducing your suppliers' energy bills can help reduce your exposure to anticipated rises in energy prices;
- Reducing your product's overall carbon footprint can improve your brand image and increase market share; and
- Addressing these kinds of issues may make you a preferred supplier to companies with a corporate social responsibility interest like Wal-Mart or Westpac.

### Consider what your product's life-cycle means

**to your business:** Could your product's low carbon footprint or recyclability form part of your marketing strategy? Could rationalising up-stream processes cut procurement costs?

### Develop a high-level map of your product's life-cycle:

Identify the key processes along your supply chain that contribute most to your product's carbon footprint.

### Target the most carbon-intensive processes for

**improvements:** Look at the key processes you have identified and brainstorm strategies for reducing their impacts. Work with suppliers to achieve cuts in energy and material use, or identify suppliers who have already adopted low carbon practices.

### ACTIONS:

#### Basic

- Contact [Sustainability Victoria](#) about participating in an exciting new life-cycle mapping tool, which will be available online in November 2010.

#### Advanced

For businesses interested in full life-cycle analysis:

- [Contact the EPA](#) team for life-cycle tools and personalised assistance
- Find private consultants to help you through a full life-cycle analysis via the [Carbon Market Services Directory](#)

## CASE STUDY:

### CUTTING SUPPLY CHAIN EMISSIONS FROM WALKERS POTATO CRISPS

In 2007, Walkers became the first business to display the Carbon Trust's Carbon Reduction Label for its innovative work in reducing the supply chain emissions of its potato crisps.

"By footprinting our products and better understanding where the 'hot spots' in our supply chain are, we are able to develop a targeted carbon reduction strategy," said Sustainability Director Martyn Seal.

For Walkers Potato Crisps, the breakdown was as follows:

- Raw materials 36 per cent
- Manufacturing 17 per cent (managed by Walkers)
- Packaging 34 per cent (managed by Walkers)
- Distribution 10 per cent
- Packaging disposal 3 per cent

Working with The UK Carbon Trust, Walkers identified an opportunity to reduce the energy input to both its raw materials and its manufacturing process.

Walkers paid farmers for potatoes by weight, unwittingly giving farmers an incentive to increase potato water content by storing them in energy-intensive humidifiers. Walkers would then use energy drying the potatoes out again so they could be fried and turned into chips.

The solution was to give farmers a bonus for drier potatoes – reducing the need for both processes. From 2005 to 2007, total energy input to its potatoes reduced by 33 per cent and water needs fell by 45 per cent. Walkers reduced the carbon footprint of the potato chips by 7 per cent and saved 4800 tonnes of CO<sub>2</sub> emissions – and Walkers Potato Crisps now carry the Carbon Reduction Label.

And since 52 per cent of UK-based consumers say they are more likely to buy a product carrying the Carbon Reduction Label, their competitive advantage is clear.

## 2. IMPLEMENT STRATEGIES FOR CUTTING SUPPLY CHAIN CARBON

**Improve your own supply chain practices:** Use the resources to the right to improve your procurement (inputs) and waste disposal (outputs) practices.

**Get suppliers on board:** Inform suppliers about the targets and actions your business is undertaking and share positive results. Providing low carbon case studies that match suppliers' businesses operations may give them useful ideas. Lastly, communicate the potential positive impact on final sales of producing a product with a low carbon life-cycle. Alternatively, locate suppliers who have already taken responsibility for their carbon emissions.

**Share information:** Encourage suppliers to look at the sections of this Guide that are most relevant to their business processes. Contact Sustainability Victoria and the EPA to discuss what kind of strategies may suit your suppliers, given their specific industries, and what kind of information might be most helpful.

**Offset life-cycle impacts:** You can offset product-associated emissions to achieve a low carbon, or even carbon-zero, product. For more information on carbon neutral products, see the 'Offsetting' section of this Guide.

### WESTPAC'S 'SUSTAINABLE SUPPLY CHAIN MANAGEMENT' PROCESS

Westpac's supplier assessment process includes questions about each supplier's:

- Sustainability management protocols
- Measurement of sustainability indicators
- Setting of targets to improve these indicators
- Other impacts on employees, communities and other stakeholders

Consider how making your business low carbon could help you become a more attractive supplier.

### SUPPLY CHAIN CHECKLIST

#### TOP TIP

**An easy-to-use online tool for guiding businesses through broader life-cycle mapping will be released by Sustainability Victoria in November 2010. Sustainability Victoria will offer businesses workshops and advice to help them use the tool effectively.**

### RESOURCES:

#### TO ADDRESS PROCUREMENT AND WASTE DISPOSAL

##### Procurement:

- [ECO-Buy](#) helps businesses integrate sustainability into purchasing decisions. Search its index of sustainable products and providers or become a member and access more comprehensive resources and assistance.
- [Eco-specifier](#) provides assistance to builders looking to improve the environmental performance of projects through better use of materials.

##### Waste:

- The Victorian Waste Management Association keeps a [waste exchange](#) website, which provides ways of diverting your waste from landfill, or even using another business' waste in your production processes.
- The [Beyond Waste Fund](#) will provide \$14 million of funding for waste minimisation projects across various industries.
- Reduce packaging at each stage of the process, with the Ai Group [Packaging Guide](#).
- Use Sustainability Victoria's [recycling services locator](#).
- Consult the [E-waste collection guide](#) at What Can I Do Right Now for disposal of electronic waste.

# OFFSETTING YOUR EMISSIONS

Offsets provide a way for firms to 'cancel out' their own unavoidable emissions by funding projects that reduce carbon emissions elsewhere. Nevertheless, offsets can be a cheap and easy option and allow businesses to go 'carbon neutral' – with great benefits for their brand reputation. To purchase offsets yourself, and potentially even become carbon neutral, this Guide can help you to:

- 1. DECIDE HOW TO USE OFFSETS**
- 2. BUY CERTIFIED HIGH-QUALITY OFFSETS**

## 1. DECIDE HOW TO USE CARBON OFFSETS

There are three key questions to resolve:

**What should I offset?** You can offset the emissions arising from any aspect of your business: your car fleet; your plane travel; the life-cycle footprint of a single product; or even the emissions of your entire business.

**How much should I offset?** If you have an emissions target, such as a 50 per cent cut in business emissions or going entirely 'carbon neutral', you might offset however much you need to reach your target. If you go carbon neutral, you can be certified and can use carbon neutral labelling on your products.

**What kind of offsets should I use?** You can offset through various project types, including reforestation, renewable energy and energy efficiency. Each of these will have different 'co-benefits' for communities and ecosystems. See the 'Co-benefits of Offsets' on the next page to get a sense of what other benefits your offsets could have.

### TOP TIP

**Offsets do not have direct payback potential, so it may be more economically effective to reduce emissions through high-payback options first.**

SEND A MESSAGE THROUGH OFFSETS

#### MATCH YOUR OFFSET STRATEGY WITH YOUR BUSINESS COMMUNICATIONS

Think creatively about which offsetting strategy gels best with your business goals and communications strategy.

- A distribution business might choose to offset 50 per cent of fleet emissions through tree-planting;

- An electricity-intensive manufacturer might choose to offset the life-cycle emissions of a core product by funding renewable energy projects;
- Businesses that aspire to be low carbon leaders in their industries might offset even more than their entire company emissions – to go 'carbon negative', like Ferguson Plarre.
- The mecu Limited case study (see right) provides a good example of innovative offsetting.

### CASE STUDY:

#### CREATIVE OFFSETTING AT THE MECU LIMITED CREDIT UNION

Based in Kew, mecu is Victoria's largest credit union with 371 staff and more than 140,000 members.

Carbon offsetting is a key component of mecu's sustainability strategy. mecu offsets the emissions associated with the actions of its customers, by integrating offsets into financial products. For example, mecu's:

- Car financing service, named 'GoGreen<sup>®</sup>', provides incentives for energy efficient cars and offsets the emissions generated by the cars financed.
- Home loans for new houses that require land clearing provide biodiversity offsets for the protection of an equivalent area of land.

mecu has purchased 2 properties totalling 437 hectares for replanting in the west Wimmera region of Victoria. Beyond just offsetting carbon, planting trees in the Wimmera means restoring prime habitat for the endangered Black Cockatoo – a strategy that has been useful in building customer interest in the offsetting program.

Through projects like that at Wimmera, mecu aims to go completely carbon neutral by 2011.

mecu recently won the 2009 Australasian Reporting Award for Sustainability Reporting, and the 2009 Victorian Premier's Sustainability Award for its green products and services – it offers, for example, a loan pause where home owners can install sustainable upgrades such as solar panels or water tanks.

Has this approach come at the cost of profitability? Not so, says Rowan Dowland, General Manager Development: "Our record figures during the global financial crisis show that socially and environmentally responsible banking makes sound financial sense."

## 2. BUY CERTIFIED HIGH-QUALITY OFFSETS

Some dubious practices have led to criticism of offset credibility and poor quality offsets still exist. However, effective mechanisms have been developed to ensure good quality offsets can easily be located.

**Nationally:** The [National Carbon Offset Standard](#) (NCOS) provides guidance on what constitutes a high-quality offset, and offers a process for being awarded a carbon neutrality label.

**In Victoria:** The Victorian Government is developing a [Carbon Exchange](#) to allow purchase of accredited Victorian carbon offsets from local forestry and agriculture projects.

If you have decided to offset all your emissions and go carbon neutral, you will also want to register your carbon neutrality and begin using carbon neutral logos in your promotions.

### POINTS TO REMEMBER:

- Try to buy NCOS-approved offsets, which includes the following reputable international standards under its umbrella: the Voluntary Carbon Standard, the Gold Standard, the Clean Development Mechanism.
- Always make sure the offsets you are buying get the tick for being 'additional', which means the emissions reductions are not counted twice and the transaction is recorded in a publicly transparent registry.
- You can choose from a wide range of offset types (see 'Co-benefits of Offsets' to the right) that have a range of different positive impacts on communities and the environment.

### ACTIONS:

#### Contact an offset provider

- Through the [Carbon Offset Guide's](#) reputable offset listings.
- Through [CHOICE Magazine offset ratings](#), which provide an especially critical look at offset quality.

#### Register/claim carbon neutrality

##### Basic

- Businesses can hire a third party to assess their emissions (see pages 14-15 for buildings, 19-20 for manufacturing) and then buy NCOS-conforming offsets. When claiming carbon neutrality, take care to avoid using misleading language (see 'Challenge: Greenwash' on page 36).

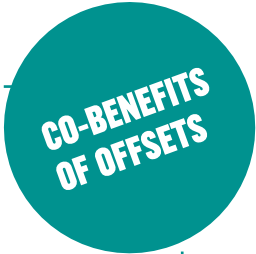
##### Advanced

- Businesses can also undertake the process of [registering as carbon-neutral](#) under the NCOS Carbon Neutral Scheme.

### THE MANY CO-BENEFITS OF INVESTING IN OFFSETS

Part of the value of offsetting emissions comes about through 'co-benefits' – the positive side-effects of offset projects. For example, offsetting can contribute to:

- **Biodiversity:** e.g. funding plantations can effectively prevent deforestation and preserve species communities;
- **Salinity:** e.g. the Murray Darling Rescue program, run by the Scouts and Greenfleet, planted 1,000,000 trees across 70 sites along the Murray Darling River;
- **Local community and business capacity building:** e.g. providing work in offsetting roles, regenerating ecosystems that provide services to local communities (erosion prevention, tourism, etc.), giving indigenous peoples stewardship roles over their lands;
- **Low carbon industry growth:** e.g. funding the construction of a wind farm will help grow the industry and support green jobs; and
- **Developing regional growth:** e.g. installing fuel-efficient woodstoves to help local communities in poorer regions of the globe produce more heat with less wood and fewer negative health impacts.



### TOP TIP

The [ACCC Guide to Carbon Claims and the Trade Practices Act](#) is a useful resource for businesses wanting to know more about their obligations when claiming carbon neutrality.

# COMMUNICATING YOUR ACHIEVEMENTS

After reducing your carbon footprint or taking leadership beyond your organisational boundaries, the next step is to unlock the competitive advantages of a low carbon reputation by communicating your achievements to your customers, suppliers and the broader community. Key actions you can take are:

- 1. UNDERTAKE GREEN MARKETING**
- 2. CONSIDER COMPETING FOR A GREEN BUSINESS PRIZE**



## 1. GREEN MARKETING

With 67 per cent of consumers more likely to buy a product with a low carbon footprint, the potential for competitive advantage is clear. Key green marketing tips include:

- Green credentials alone cannot make up for a sub-standard product. Where green marketing really shines is in brand differentiation: helping consumers choose between products where they have no strong feelings either way.
- Emphasise value added for the customer: Does your product save energy or last longer? Do your efficient processes make the product cheaper? Can the product help show that your customer is environmentally-conscious? Can you tell a tangible story about how the customer is making a difference?
- Know your market: What does your customer care about and how can you relate that to the low carbon footprint of your product?

Steve Plarre, CEO of Ferguson Plarre Bakeries, recommends being careful not to over-emphasise your 'green' credentials. Doing so risks suggesting to the customer that they are paying a high environmental price premium.

### ACCREDITATION AND LOW CARBON LABELS:

Meeting international standards, and displaying this in your communications, helps you to provide credible evidence of your low carbon status. [ISO 14000](#) is a family of internationally recognised environment standards, with ISO14001 and ISO14064 useful for businesses that wish to verify their environmental management system and their low carbon claims.

Ask your energy assessor whether they can accredit your business.

Other sustainability labels and standards include [Energy Star](#) and [Energy Rating](#) for efficient products, the [National Carbon Offset Standard](#) for business or product carbon neutrality, [Good Environmental Choice](#) for product life-cycle environmental performance and [GreenPower](#) as explored in the 'Sourcing clean energy' section of this Guide.

### TOP TIP

Directories such as ['The Green Pages'](#) and ['The Green Directory'](#) provide another way to get recognition for your adoption of green practices, linking your business to consumers with an interest in low carbon products.

### CASE STUDY:

#### COMMUNICATING GREEN ACHIEVEMENTS AT SUSTAINABLE LIVING FABRICS

Kay and Bill Jones bought an ailing upholstery company in 1998. Six years later they turned it green, rebranding the company as 'Sustainable Living Fabrics' and their fabrics as The Green Living Collection. "We saw the environment as a big issue," says Kay. "We recognised that by embracing environmental issues we could reposition the company as a market leader."

Both Bill and Kay feel strong contempt for 'greenwash', so made every effort to ensure their transition would be authentic and independently verified. Their approach included:

- Getting a third party carbon footprint assessment;
- Cutting carbon emissions from their own processes as well as their supply chain; and
- Minimising the use of toxic chemicals in their production process.

Independent auditing determined their fabrics now have a footprint of 36 kg of CO<sub>2</sub> per kilogram of fabric, compared to 73 kg before. They were the first manufacturing company in Australia to have every one of over 400 products certified Greenhouse Neutral under the Australian Government Greenhouse Friendly Initiative, and are the first company to transition to the Australian government NCOS Carbon Neutral scheme.

Their position as an environmentally-certified industry leader forms the crux of their communications, and Kay says the strategy has been a great success – raising their profile and boosting market share.

Internally, the payback has been a sense of empowerment for the company and its employees and, says Kay, "even more importantly, we have set industry benchmarks and driven environmental change."

Since its transition, the company has won awards from Design Victoria, the Premier, the City of Monash and the United Nations Association – winning the Lincoln Scott Triple Bottom Line award two years in a row.

**“We recognised that by embracing environmental issues we could reposition the company as a market leader.”**

Kay Jones, Sustainable Living Fabrics

## 2. CONSIDER COMPETING FOR A GREEN BUSINESS PRIZE

A wide range of organisations in Victoria and Australia give recognition to businesses that have adopted low carbon practices, to help spread the word of their achievements. Here are some of the most important:

- **Banksia Awards:** are Australia's most prestigious environmental awards, and have recognised hundreds of Australians over the past 21 years for their efforts in improving our environment.
- **Victorian Premier's Sustainability Awards:** recognise innovation and outstanding achievement in sustainable resource use in Victoria. The Premier's Sustainability Awards have both a large and a small business category award each year.
- **Australian Business Awards:** includes awards for businesses and for products, including dedicated environmental sustainability and eco-product awards. Any business of any size may apply.

- **United Nations Association of Australia:** there are 12 different award categories offered by the United Nations Association of Australia, several of which are appropriate for business.
- The **Australian International Design Awards** offer awards across a wide range of product categories, with the overall sustainability of the product a large determinant of success.
- VECCI's Grow Me The Money offers an '**Award for Results**' to recognise its program participants.

Also check your local council: examples include the [Whitehorse Sustainability Awards](#) and the [Yarra Sustainability Awards](#).

### BE AUTHENTIC IN YOUR LOW CARBON MARKETING

Consumers will reward environmentally sound products and business practices, but false environmental claims, or 'greenwashing', have made them wary and prompted increasing regulation.

When advertising, promoting at the point of sale or producing product labels, the Australian Competition and Consumer Commission (ACCC) recommends you:

- **Be honest and truthful** in all your communications;
- **Give specific details** about what is beneficial about your product, in plain language – for example, that your product's emissions are reduced by one quarter because it is produced with 50 per cent GreenPower;
- **Link the environmental benefit** to a part of the product or production process, such as the hybrid cars your employees travel in or the recyclable packaging you use; and
- **Support your claims with evidence** using results from audits, indicating the standards you have met and showing off your awards.

ACCC has [guidelines](#) for claiming low carbon or carbon-neutral status.

Futerra, a UK green communications organisation, offers a [Greenwash Guide](#) to help consumers, businesses and marketers navigate the territory. The Greenwash Guide also provides case studies of good and bad green-focused advertising campaigns.

The Ogilvy [From Greenwash to Great](#) guide to green marketing provides terrific case studies of businesses that have made innovative and honest marketing strategies critical to their success

CHALLENGE:  
'GREENWASH'

# NEW PRODUCTS NEW SKILLS

The game is changing fast. Consumers, businesses, and governments alike are becoming more carbon-conscious with every passing day. These high-speed changes signal the opening of new niches – and a whole host of opportunities for innovation. This section of the Guide seeks to help businesses reconsider their purpose and their products through a low carbon lens, with two key actions:

- 1. ENGAGE WITH GROWING MARKETS**
- 2. CREATE AN INNOVATIVE NEW PRODUCT**



## 1. ENGAGE WITH GROWING MARKETS

Trends in consumer opinion, changes in government policy and shifting prices of energy and materials mean that the demand for a wide range of existing low carbon products and services is reaching new heights. Re-skilling and re-tooling to take a leading position in these growing markets will pay dividends and help you keep at the front of the curve.

Take the Victorian Government's 'Action Plan for Green Jobs', which finds that thousands of new jobs will arise from \$175 million in Government funding for projects including the [1200 Buildings](#) initiative of Melbourne City Council, which aims to retrofit 1200 commercial buildings by 2020. Building-related businesses

responding to the resulting increased demand include:<sup>17</sup>

- **mLight**, a small business scaling-up its sale of high-efficiency lighting (such as T5 fluorescents and LEDs);
- **Glass Action**, a business including more recycled glass in its products and increasing its double-glazing capacity; and
- **Fantech**, a medium-sized fan manufacture that is designing ventilation systems specifically for building retrofits.

### RESOURCES:

#### FIND OUT MORE ABOUT LOW CARBON SKILLS AND INDUSTRIES

Look at Environment Victoria's report, [Victoria – The Green Jobs State](#), which explores opportunities created in emerging wind and solar energy, public transport, energy efficiency and recycling markets.

See Sustainability Victoria's training courses for [green trades skills](#), to become a green electrician, painter or plumber, for example. A wide range of [university and TAFE courses](#) throughout Victoria can keep your skills and knowledge at the cutting edge.

Ask your industry association about cutting-edge low carbon developments in your industry and keep an eye on developments in your industry internationally. Consider, for example, the UK boom in organic and biodynamic foods over the previous few years, With Australian consumer opinion catching up, leading grocery stores and supermarkets are prepared for the same to occur here.

### CASE STUDY:

#### RE-SKILLING FOR THE GREEN MARKET AT SUSTAINABLE PLUMBING SOLUTIONS

When plumber Brent Papadopolous started Sustainable Plumbing Solutions in 2002, he faced a host of sceptics who insisted there was no market in solar hot water, rainwater tanks or greywater systems.

Turn to 2007, however, and the business was thriving, with 10 employees and Brent being named 'Green Plumber of the Year'. Brent's success continued, with Sustainable Plumbing Solutions being awarded the 2009 Premier's Sustainability Award for its innovative research, design and installation work.

The company still works hard to keep ahead of the curve: it has worked on the Solar Systems research and development project at Bridgewater, near Bendigo, testing new types of solar energy systems. In Anglesea, the company has worked on a novel cooling system at the Department of Sustainability & Environment's office and depot.

At peak times, over 95 per cent of Sustainable Plumbing Solutions' work is on green plumbing projects across residential, commercial and industrial settings. "When I started you had to push the whole sustainability issue," says Brent. "But now it's established, people come to us."

Brent says he got into green plumbing because it was different, exciting and challenging and he saw a market for it. And Brent's biggest thrill? "Doing something good for the environment that actually makes a difference," he says.

"We can make a difference now and into the future by using available technologies such as rain water harvesting, grey water systems, solar hot water systems, efficient plumbing fittings and appliances to ensure our use of water and energy is sustainable."

## 2. CREATE AN INNOVATIVE NEW PRODUCT

The Sensis [Small Business, Big Opportunity](#) handbook poses the question: “Is there an opportunity to create a ‘Prius equivalent’ in your industry?” The Prius has been a game-changer for Toyota, invigorating its company profile and preparing it for the future of car design. When hybrids go truly mainstream, Toyota may be the name most associated with high-quality, low-emissions cars. Victorian businesses that have pushed new innovations into the market include:

**KeepCup**, who created a re-usable take-away coffee cup, the ‘[KeepCup](#)’, which took Melbourne by storm. Based in Fitzroy, their idea for ‘Hot Coffee, Cool Planet’ has now seen them sell 250,000 KeepCups internationally.

**Nutech Paint**, a major paint supplier in Australia, which developed a hyper-reflective paint for use on roof space to reduce heat-gain during summer.

**Clean and Gone** is a Victorian de-fitting and demolitions company awarded by VECCI for developing expertise in salvaging and recycling/reselling the materials they remove.

**Is there an opportunity to create a ‘Prius equivalent’ in your industry?**

### WHO CAN I CONTACT FOR HELP?

The [What is Eco-Design?](#) guide provides guidance to industrial, graphic and fashion designers on how to produce low environmental impact products. Sustainability Victoria’s [Design for Sustainability](#) resources will also be useful.

Consider applying for a [Commercialisation Australia](#) grant to turn your innovative idea into a successful commercial venture.

### GROWING LOW CARBON MARKETS

Demand is likely to rise for new low carbon technologies and services, such as:

- Energy efficiency technologies and services
- Energy management systems and software
- Renewable energy, distributed generation and cogeneration
- Efficient combustion technologies
- Carbon offsetting and trading
- Sustainable construction and architecture
- Biofuel and electric automotive technologies
- Waste recycling and reuse technologies
- Carbon-sequestration in agriculture and forestry

**NEW DEMANDS**

### GOVERNMENT SUPPORT:

#### COMMERCIALISATION AUSTRALIA GRANTS FOR NEW PRODUCTS AND SERVICES

Commercialisation Australia is a \$196 million Australian Government program that provides grants to help businesses proceed with early commercialisation of innovative new products and services. The four available funding programs are:

- Skills and knowledge, which provides funding up to \$50,000 for businesses to access specialist advice and services they need to commercialise new ideas.
- Experienced executives, which provides funding up to \$200,000 over two years for businesses to recruit experienced Chief Executive Officers.
- Proof of concept, which provides funding from \$50,000 to \$250,000 to test the commercial viability of new products and services.
- Early stage commercialisation, which provides repayable funding from \$250,000 to \$2 million for businesses to develop a new product or service to the stage that it becomes market ready.

**ENVIRONMENT PROTECTION AUTHORITY VICTORIA (EPA)**

Head Office  
200 Victoria Street  
Carlton 3053  
Tel: (03) 9695 2722  
Fax: (03) 9695 2610

Email: email through the [EPA website](#)

The EPA is an independent statutory authority that establishes and regulates environmental standards. EPA works with organisations to meet and go beyond the standards through developing environmental services such as its 'Carbon Management Principles'.

**SUSTAINABILITY VICTORIA**

Urban Workshop  
Level 28, 50 Lonsdale Street  
Melbourne VIC 3000  
Tel: 03 8626 8700  
Fax: 03 9663 1007  
Email: [info@sustainability.vic.gov.au](mailto:info@sustainability.vic.gov.au)

For energy, waste and recycling queries, call 1300 363 744

Sustainability Victoria was established in 2005 to help Victorians be resource efficient and live more sustainably at home, at work and in their communities. It acts as a catalyst for sustainable growth and development, supporting government policy and complementing the activities of government and non-government agencies. It works with business, the community, individuals and the government to achieve meaningful outcomes in greenhouse gas abatement, energy efficiency, renewable energy, waste reduction and the smarter use of resources

**SMALL BUSINESS VICTORIA**

Department of Innovation, Industry and Regional Development  
Level 34, 121 Exhibition Street  
Melbourne VIC 3000  
Tel: 13 22 15  
Email: email through the [Business Victoria website](#)

Small Business Victoria makes it easier to start and operate a business and facilitate business growth. A range of programs and services are offered to help people save time and money, support indigenous growth and skill small business people for growth, as well as: register a business name, employ for the first time or reduce carbon footprint.

**AI GROUP**

Melbourne Office  
20 Queens Road  
Melbourne VIC 3004  
Tel: 1300 733 752  
Email: [sustainablebusiness@aigroup.asn.au](mailto:sustainablebusiness@aigroup.asn.au)

Ai Group is a national industry association working with small, medium and large businesses to deliver a range of government funded programs to improve the uptake of sustainable business practices by industry. Ai Group also offers consultancy and training services, comprehensive guides to improving business practice (through, for example, lean and green manufacturing) and provides programs such as the 'Sustainable Business Network', 'Environmental Solutions Forums' and the 'Sustainability Covenant'.

**VICTORIAN EMPLOYERS CHAMBER OF COMMERCE AND INDUSTRY (VECCI)**

Sustainability Services  
486 Albert Street  
East Melbourne VIC 3002  
Tel: 03 8662 5333  
Fax: 03 8662 5489

Email: [vecci@vecci.org.au](mailto:vecci@vecci.org.au)

Independent and non-Government, VECCI makes its members more successful by working for their interests and delivering products and services for growth, assurance and excellence. Carbon Down, Grow Me The Money and Carbon Compass are part of the offering from VECCI Sustainability Services.

**THE ENERGY EFFICIENCY COUNCIL**

The Green Spaces  
490 Spencer St  
West Melbourne VIC 3003  
Tel: 03 8327 8422  
Fax: 03 9328 4822  
Email: [info@eec.org.au](mailto:info@eec.org.au)

The Energy Efficiency Council is the voice for cogeneration and energy efficiency in industry and commercial buildings. The Council champions its members' interests and aims to:

- Grow the market for energy efficiency products and services
- Ensure that energy efficiency is implemented with excellence and accountability
- Establish energy efficiency as the key measure for carbon abatement to 2030

ORGANISATION	PROGRAM	BUSINESS SIZE	DESCRIPTION
AI GROUP	<a href="#">Sustainable Business Network</a>	ALL	The Sustainable Business Network provides access to advice on implementing sustainable business practices, to stay competitive in a global supply market and to network with businesses seeking innovative solutions to their environmental challenges.
	<a href="#">Enterprise Connect</a>	SMES	Enterprise Connect offers comprehensive advice and support to eligible Australian small and medium-sized enterprises to help them transform and reach their full potential. Ai Group's Enterprise Connect Advisors will work with SMEs to boost productivity, improve innovation and ensure business has better access to new ideas and new technology.
	<a href="#">Sustainability Covenant</a>	ALL	Funding support and assistance for sustainability projects which assist Victorian industry to adopt innovative environmental practices and realise significant resource and energy efficiency, waste reduction, ecological and economic outcomes.
	<a href="#">Sustainability Consulting &amp; Training</a>	ALL	Ai Group provides consultancy services that include undertaking sustainability assessments, and can help guide businesses through actions towards going low carbon.  Ai Group's environment and energy training program provides businesses with the skills to help with environmental challenges. Training courses include Compliance with Environmental Obligations, Practical Environmental Management and Developing, Implementing and Improving your EMS. We can also tailor on-site environmental training to suit your needs.
VECCI	<a href="#">Grow Me The Money</a>	SMES	The Grow Me The Money program is designed to take SMEs through a 12-step program, from identifying their current resource use to promoting your achievements. Grow Me The Money businesses have saved, on average, \$7,020 and 60.6 tonnes of carbon, each.  The program pricing starts at an affordable \$109 and is fully tax deductible
	<a href="#">Sustainability Consulting &amp; Learning</a>	SMES	VECCI also provides consultancy services that can help guide businesses through actions towards the low carbon economy. Specialist areas include: Sustainability strategy and policy development, On-site Opportunity Assessments and Carbon Footprinting  Improve your understanding of operating your business in a new era of green choices and environmental sustainability. Course options include: Carbon Management 101 Briefing; Green Office Briefing; Sustainability in Action Workshop; Creative Thinking and Sustainability workshop; and a Diploma in Environmental Sustainability.
	<a href="#">Carbon Compass</a>	SMES	Carbon Compass, by Carbon Down, is designed to help SMEs navigate their way to becoming more sustainable. The website collates the latest information and resources on carbon reduction from a broad range of independent providers, in an easy to use format that guides you directly to the answers you seek on carbon.
	<a href="#">What Can I Do Right Now?</a>	SMES	Carbon Down's 'What Can I Do Right Now?' is an easy-to-use website that gives time-poor SMEs quick and easy actions they can implement around the office, starting right now.

ORGANISATION	PROGRAM	BUSINESS SIZE	DESCRIPTION
ENVIRONMENT PROTECTION AUTHORITY	<a href="#">Carbon Management Principles</a>	ALL	A highly detailed, 8-step guide towards reducing the carbon emissions of your business. This toolkit will be most useful for larger businesses that are interested in developing a detailed and comprehensive understanding of carbon management issues and strategies.
	<a href="#">Carbon Offset Guide</a>	ALL	The Carbon Offset Guide is an independent directory of Australian carbon offset providers developed through a partnership between EPA Victoria and Global Sustainability at the Royal Melbourne Institute of Technology (RMIT). It is a resource for businesses, government agencies, NGOs and individuals seeking information about carbon offsets.
	<a href="#">Carbon innovators network</a>	ALL	EPA launched the Carbon Innovators Network in 2007 to address a growing business need for support and advice on climate change. Since then, the network has grown to over 1400 members representing business and industry, government and not-for-profit sectors. The network brings together business leaders and climate change experts to stimulate debate and innovation in carbon management. Benefits of membership include information updates and e-newsletters, discussion forums, networking and events, opportunities for public recognition, and influence over the tools and resources that EPA develops.
SMALL BUSINESS VICTORIA	<a href="#">Green Your Business, Grow Your Business Seminar</a>	SMES	Small Business Victoria partners with local government, adult education providers and industry associations to deliver this seminar across Victoria. The seminar offers resources and contacts that will assist SMEs to reduce their carbon footprint and save money by understanding cost reduction measures in the areas of energy efficiency, water conservation, and waste reduction.
	<a href="#">Business Victoria Online</a>	SMES	Business Victoria's 'Creating a Green Business' website has information to help business owners become more sustainable. Find out about how to: be more energy efficient; market yourself as a green business; meet the Emissions Trading Regulations; and manage the environmental impacts your business cannot avoid.
SUSTAINABILITY VICTORIA	<a href="#">5-Star Sustainability</a>	ALL	An interactive sustainability benchmarking tool for industry based businesses and government organisations. The simple 'question and answer' self-assessment format provides the high level information and advice that will set your organisation on the way to sustainability leadership.
	<a href="#">ResourceSmart</a>	ALL	The ResourceSmart website is a collection of useful tools for all businesses, with guides providing advice for reducing energy consumption, water use, performing life-cycle analyses, accessing various government grants, and much more.

## AUSTRALIAN GOVERNMENT POLICIES AND PROGRAMS

### CLEAN BUSINESS AUSTRALIA

The Australian Government has invested \$240 million into Clean Business Australia, envisioned as a partnership between government and business with the goal of driving energy and water savings through innovation.

The Green Building Fund program under Clean Business Australia is re-opening with a \$30 million injection of funds over 2010-2011. The Green Building Fund provides direct partial funding of energy efficiency projects in commercial office buildings, hotels and shopping centres – from \$50,000 to \$500,000 to meet up to 50% of the cost of a project.

The Green Building Fund is transitioning into the Tax Breaks for Green Buildings program in July 2011. Under this program, businesses that invest in eligible assets or capital works that improve the energy efficiency of commercial office buildings, hotels or shopping centres can access a tax deduction of up to 50% of the value of the asset or capital works.

You can find out more about the program at the [Green Building Fund website](#).

### COMMERCIALISATION AUSTRALIA

A \$196 million Australian Government program that provides grants to help businesses proceed with commercialisation of innovative new products and services. The four available funding programs are:

- Skills and knowledge, which provides funding up to \$50,000 for businesses to access specialist advice and services they need to commercialise new ideas
- Experienced executives, which provides funding up to \$200,000 over two years for businesses to recruit experienced Chief Executive Officers
- Proof of concept, which provides funding from \$50,000 to \$250,000 to test the commercial viability of new products and services
- Early stage commercialisation, which provides repayable funding from \$250,000 to \$2 million for businesses to develop a new product or service to the stage that it becomes market ready

At the time of writing, applications are currently being accepted.

You can find out more on the [Commercialisation Australia website](#).

### RENEWABLE ENERGY CERTIFICATES

Renewable Energy Certificates (RECs) are electronic, tradeable commodities equal to 1 MWh of renewable energy generation each. Electricity retailers can meet their renewable energy targets by helping households and small and medium-sized enterprise pay for rooftop solar systems. Both solar hot water systems and photovoltaic solar cells create RECs, which can be sold to reduce the up-front cost of your system.

REC pricing varies according to demand in the REC market, with prices ranging from \$20-50 over the past few years. Be sure to confirm what the REC price is upon purchase. Importantly, for the first 1.5 kW of solar photovoltaics purchased, pricing is fixed at a favourable minimum of \$40 per REC.

See the next page for an explanation of the combined effects of RECs and Victorian Government measures on purchasing solar photovoltaics or solar hot water systems.

You can find more information on RECs at the [Office of the Renewable Energy Regulator](#).

## VICTORIA'S CLIMATE CHANGE WHITE PAPER ACTION PLAN

The Victorian Government released its [Climate Change White Paper Action Plan](#) in July 2010. The Action Plan includes a number of measures that are relevant to businesses wishing to reduce their carbon footprint.

### THE ENVIRONMENT & RESOURCES EFFICIENCY PLANS

The Environment & Resources Efficiency Plans (EREP) is a program that applies to very large consumers of energy and water – users of more than 100 TJ of energy and/or 120 ML of water per annum. Around 250 commercial and industrial sites across Victoria currently participate, though the scheme is being expanded under the Climate Change White Paper to cover more large businesses. The EPA encourages all businesses to voluntarily participate, which will give them access to the support that EREP participants receive.

Businesses participating in the EREP are required to show that they have assessed their processes to identify energy, water and waste savings opportunities. Any improvements with a payback of three years or less must be implemented. On average, EREP participants have found that the changes they have implemented have come with paybacks of under 10 months.

The EPA provides tools, workshops and tailored support along the way to help participating businesses identify their opportunities and undertake improvements.

You can find out more about the EREP at the [EPA website](#).

**THE ENERGY SAVER INCENTIVE SCHEME EXPANSION**

The Energy Saver Incentive Scheme is a program that sets a target for energy savings (in the residential sector), and requires energy retailers to meet these targets through energy efficiency activities – such as providing households with energy saving products and services at no cost or reduced cost. Under the Climate Change White Paper Action Plan, the program is set to expand and, subject to a Regulatory Impact Statement process, allow small and medium-sized enterprise to receive these incentives.

When implemented, the scheme will provide a big opportunity for small and medium-sized enterprise in Victoria: it will cut the up-front cost of energy efficiency improvements while still allowing businesses to reap the rewards of reduced energy bills and a smaller environmental footprint.

You can find information on the Scheme and advice on its operation at the [Essential Services Commission website](#).

You can also [become a participating tradesperson or retailer](#) in distributing energy efficient equipment.

**SUPPORT FOR ROOFTOP RENEWABLE ENERGY****Terms to know:**

Victorian Energy Efficiency Certificates (VEECs): Victorian electricity retailers are required by the Energy Saver Incentive Scheme to meet energy efficiency targets by helping households (and soon small and medium-sized enterprise) fund efficiency projects. Each VEEC is today worth \$11.

You can find more information on VEECs at the [Department of Primary Industries](#).

Feed-in tariff (FIT): for photovoltaic systems less than 5 kW. Every kWh of electricity you generate and feed in to the electricity grid must be purchased by energy retailers for a set price above the wholesale electricity price – for solar photovoltaics, the FIT is 60c per kWh. Note that this FIT applies only to the electricity that your business does not use itself, so you will not be able to sell all the electricity you generate – and small and medium-sized enterprise with larger power bills may not be able to sell any electricity through the FIT.

You can find more information on the FIT at the [Department of Primary Industries](#).

**EFFECTS ON PURCHASING SOLAR HOT WATER**

Some solar hot water systems create RECs and a majority will soon create VEECs. RECs and VEECs can be sold through the solar hot water retailer to significantly reduce the cost of installing a solar hot water system. Savings range from hundreds to tens of thousands of dollars, depending on the size of the system.

**EFFECTS ON PURCHASING SOLAR PHOTOVOLTAICS**

Solar photovoltaics also create RECs, as explained under 'Renewable Energy Certificates' on the previous page. Under the Australian Government's Solar Credits scheme, the first 1.5 kW receives both a \$40 fixed REC price and a REC multiplier of 5x, making it the most favourable in terms of up-front cost. The REC multiplier will decrease steadily over the next few years.

For a 5 kW system, savings on initial cost could be almost \$8000 (a total of 195 RECs at \$40 each).

Under the premium FIT of 60c per kWh, a 5 kW solar system could generate 7000 kWh each year, valued at \$4200. However, you cannot sell the electricity that your business uses – make sure you compare the likely output of your solar photovoltaic system with your yearly bill, and calculate how much excess electricity you will be able to sell through the FIT. Purchasing the biggest possible system (5kW max under the FIT) and using as little electricity as possible will maximise return.

**CLEAN BUSINESS FUND**

The Victorian Government is establishing a Clean Business Fund to support projects in business that would be viable if a carbon price was in place but which otherwise would not be commercially viable. The Fund will assist businesses to respond to changes in the business environment and the potential impacts of climate change. The Fund will also support projects that can deliver carbon emissions reductions across supply chains and boost businesses' bottom lines.

**CARBON EXCHANGE**

The Victorian Carbon Exchange will enable the purchase of Victorian offsets. Building on existing leadership in the development of eco-markets, the Victorian Government will enable individuals and businesses to voluntarily offset their carbon emissions and be confident in the ecological and social integrity of their purchase. In the absence of a CPRS this will create a market incentive for Victoria's landholders and forest operators to create offsets through activities such as soil carbon sequestration, changed farming practices and new forest plantations.

To support the Carbon Exchange the Victorian Government will:

- Establish legal rights for landholders who voluntarily engage in vegetation and soil sequestration through the Climate Change Bill;
- Establish clear rules under which Crown land can be used for carbon sequestration purposes in the Climate Change Bill;
- Provide relevant and up-to-date information on the carbon stored in Victorian ecosystems and its implications for carbon markets through the LandCarbon project;
- Develop a Victorian agricultural offset scheme if no national offset standard is in place by July 2011;
- Invest in improving agricultural mitigation, adjustment and adaptation techniques, developing reliable monitoring and measurement systems; and
- Introduce a voluntary Vehicle Registration Offset Program to enable the purchase of offsets in Victoria.

**VICTORIAN TAFES**[Swinburne - National Centre for Sustainability](#)

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Tel: 1300 225 527

University Drive

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**VECCI BUSINESS SUSTAINABILITY LEARNING**

- Carbon Management 101 briefing
- Creative Thinking and Sustainability workshop
- Sustainability in Action workshop
- Green Office briefing

VECCI also offers on-site training and tailored sessions to meet your needs. Find VECCI's courses [here](#).

**AI GROUP COURSES**

- Compliance with Environmental Obligations
- Practical Environmental Management
- Developing, Implementing and Improving your Environmental Management System
- Ai Group also offers on-site training and tailored sessions to meet your needs

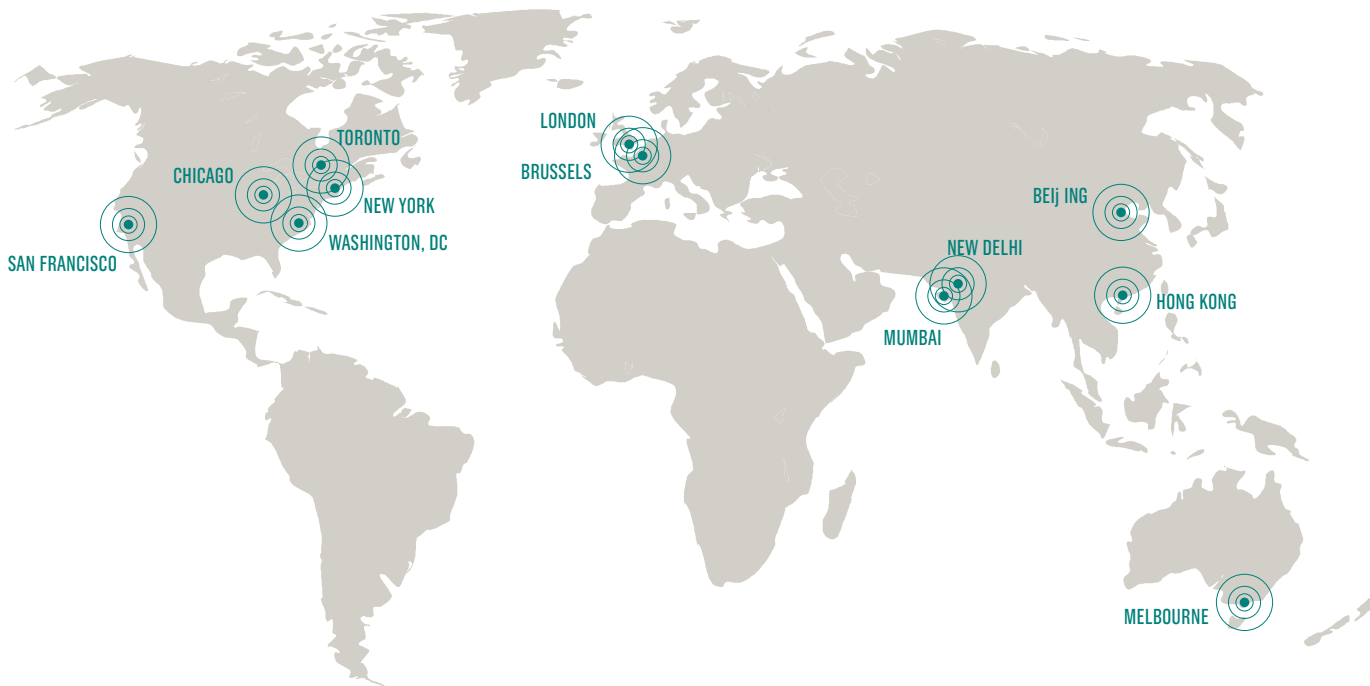
Find Ai Group's courses [here](#).

You can also look at Ai Group's list of upcoming [seminars and events](#), including environmental solutions forums.

**SUSTAINABILITY VICTORIA COURSES:**

Sustainability Victoria offers courses focused on developing [green trades skills](#).

- 1 <http://about.sensis.com.au/IgnitionSuite/uploads/docs/Sustainable%20Growth%20-%20chapter%201.pdf>
- 2 <http://www.westpac.com.au/docs/pdf/aw/wbc-group-sscm-case-study.pdf>
- 3 [http://www.tandberg.com/collateral/video\\_communication/tandberg\\_environmental\\_survey\\_report.pdf](http://www.tandberg.com/collateral/video_communication/tandberg_environmental_survey_report.pdf)
- 4 <http://www.melbourne.vic.gov.au/Environment/CH2/Evaluation/Pages/Evaluation.aspx> and [http://www.resourcesmart.vic.gov.au/documents/500\\_Collins\\_Productivity\\_Study.pdf](http://www.resourcesmart.vic.gov.au/documents/500_Collins_Productivity_Study.pdf)
- 5 [www.unglobalcompact.org/.../summit2007/gs\\_esg\\_embargoed\\_until030707.pdf](http://www.unglobalcompact.org/.../summit2007/gs_esg_embargoed_until030707.pdf)
- 6 <http://about.sensis.com.au/IgnitionSuite/uploads/docs/Small%20Business,%20Big%20Opportunity%20-%20Sustainable%20Growth.pdf>
- 7 [http://www.nabers.com.au/downloadFile.aspx?file\\_id=228](http://www.nabers.com.au/downloadFile.aspx?file_id=228)
- 8 [http://www.asbec.asn.au/files/ASBEC%20CCTG%20Second%20Plank%20Report%202.0\\_0.pdf](http://www.asbec.asn.au/files/ASBEC%20CCTG%20Second%20Plank%20Report%202.0_0.pdf)
- 9 <http://about.sensis.com.au/IgnitionSuite/uploads/docs/Small%20Business%20Big%20Opportunity%20-%20Sustainable%20Growth%20-%20full%20book.pdf> and <http://www.sustainability.vic.gov.au/resources/documents/module6.pdf>
- 10 [http://www.carbondown.com.au/downloads/Carbon\\_Down\\_Footprint\\_Report\\_December\\_2009\\_FA2.pdf](http://www.carbondown.com.au/downloads/Carbon_Down_Footprint_Report_December_2009_FA2.pdf)
- 11 [http://www.carbondown.com.au/downloads/Carbon\\_Down\\_Footprint\\_Report\\_December\\_2009\\_FA2.pdf](http://www.carbondown.com.au/downloads/Carbon_Down_Footprint_Report_December_2009_FA2.pdf)
- 12 [http://www.carbondown.com.au/downloads/Carbon\\_Down\\_Footprint\\_Report\\_December\\_2009\\_FA2.pdf](http://www.carbondown.com.au/downloads/Carbon_Down_Footprint_Report_December_2009_FA2.pdf)
- 13 <http://www.intercall.com/about-us/press-releases.php>
- 14 [http://www.cisco.com/en/US/prod/collateral/ps7060/ps8329/ps8330/9599/TelePresence\\_Research\\_Brief\\_Final\\_03\\_20\\_09.pdf](http://www.cisco.com/en/US/prod/collateral/ps7060/ps8329/ps8330/9599/TelePresence_Research_Brief_Final_03_20_09.pdf)
- 15 <http://www.transport.vic.gov.au/>
- 16 [http://www.ecodrivingusa.com/files/EcoDriving\\_Manual.pdf](http://www.ecodrivingusa.com/files/EcoDriving_Manual.pdf)
- 17 [http://www.business.vic.gov.au/busvicwr/\\_assets/main/lib60263/future%20job%20opportunities%20for%20victorian%20manufacturers%20-%202012%20buildings%20retrofit%20stimulus%20-%20full%20report.pdf](http://www.business.vic.gov.au/busvicwr/_assets/main/lib60263/future%20job%20opportunities%20for%20victorian%20manufacturers%20-%202012%20buildings%20retrofit%20stimulus%20-%20full%20report.pdf)



**ABOUT THE CLIMATE GROUP**

The Climate Group is an independent, not-for-profit organisation working internationally with government and business leaders to advance smart policies and technologies to cut global emissions and accelerate a low carbon economy. Its global coalition of 78 leading companies, states, regions and cities around the world recognise the economic and environmental imperatives of taking decisive action now. The Climate Group was founded in 2004 and has operations in Australia, China, Europe, India and North America.

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