

# Tourism Operators **RESPONDING TO CLIMATE CHANGE**



Becoming  
Carbon  
Neutral

*"Being a Climate Action 'Leader' has won our company business as tourists increasingly make their travel choices according to climate action credentials."*

Kim Thomas,  
*Big Cat Green Island Reef Cruises*



**Australian Government**

**Great Barrier Reef  
Marine Park Authority**

# Becoming Carbon Neutral



## What does it mean to be carbon neutral?

The meaning of the term "carbon neutral" is evolving as the business of climate change moves forward.

Put simply, gases in the atmosphere trap the sun's energy, keeping the Earth at a suitable temperature for life. This is called the greenhouse effect and the gases are called greenhouse gases.

As levels of greenhouse gases (mainly carbon dioxide) increase, the atmosphere traps more heat, causing the temperature of the Earth to rise, leading to changes in our climate.

In this case study, becoming carbon neutral means achieving a zero overall carbon output and therefore not contributing to climate change.

The steps to becoming carbon neutral are:

- **Calculate** your carbon footprint
- **Reduce** your carbon emissions
- **Offset** your remaining carbon emissions

## Why should I care about becoming carbon neutral?

Climate change factors are likely to have the greatest influence on the long-term outlook for the Great Barrier Reef.

Extreme weather events (cyclones, floods and days with wind over 25 knots) will increase, which could affect diving visibility, damage tourism infrastructure such as moorings and pontoons, and increase passenger discomfort. Coral bleaching events will increase in size and scale and ocean acidification will make it harder for corals to grow.

By becoming carbon neutral you will:

- Minimise the effect of your business on the environment
- Stand out to climate conscious consumers worried about the impact of their holiday.



Research by Tourism Australia shows visitors from the key markets of the UK, China and Japan rank climate change in their top three issues of concern and importance in holiday planning. By making your business carbon neutral, you can gain a competitive advantage in a marketplace of climate-savvy clients.

## How do I become carbon neutral?

Your business can become carbon neutral by following these three steps.

### Step 1. Calculate

The first step to becoming carbon neutral is to measure your business' current direct greenhouse gas emissions or "carbon footprint". The Great Barrier Reef Marine Park Authority (GBRMPA) has an online emissions calculator specifically for the marine tourism industry.

Your overall greenhouse gas emissions are calculated as the total amount of carbon dioxide (CO<sub>2</sub>-e) and other greenhouse gases emitted as a result of your business. Your total emissions are usually expressed as kilograms of CO<sub>2</sub> equivalents (CO<sub>2</sub>-e), which takes into account the global warming effects of the many different greenhouse gases.

Calculate your business' greenhouse gas emissions on the Tourism Operators' Emissions Calculator at [www.emissionscalculator.gbrmpa.gov.au/resourcedb/](http://www.emissionscalculator.gbrmpa.gov.au/resourcedb/). There are ideas to help you save money and reduce emissions on the 'Resources' page.

## Step 2. Reduce

The emissions calculator can itemise the greenhouse gases produced by different components of your business.

Now that you know the components of your business that produce the most greenhouse gases, identify changes to your operational procedures to reduce your emissions.

Strategies to change your operational procedures and reduce emissions may include:

- Choose energy efficient products when replacing appliances, vehicles and outboards. For example, new technology low emission outboard engines use 30 to 40 per cent less fuel than old technology two-stroke engines, saving you money on fuel as well as generating less emissions.
- Run all engines, vessels or vehicles at optimum efficiency levels.
- Use renewable energy such as solar or wind.
- Recycle, buy "green" and reduce business-related travel.

These actions may cost more initially, but energy savings and rebate or incentive programs will cut your costs from day one.

## Step 3. Offset

When you can't reduce your footprint any more, you can offset the remaining emissions to compensate for the greenhouse gases emitted by your business.

Your business can buy carbon offsets by investing in a project or activity that stores greenhouse gases or reduces the concentration of these gases in the atmosphere.

Carbon offset products should be:

- Accredited to a recognised standard
- Independently verified
- Offering other environmental benefits.

## Checklist

- ✓ Calculate your carbon footprint at [www.emissionscalculator.gbrmpa.gov.au/resourcedb/](http://www.emissionscalculator.gbrmpa.gov.au/resourcedb/)
- ✓ Reduce your carbon footprint by changing your operational procedures, upgrading to more energy efficient equipment and converting to renewable energy sources.
- ✓ Offset remaining emissions using an accredited scheme with direct positive benefits for the Great Barrier Reef.



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- ✓ Become certified under a recognised scheme such as Ecotourism Australia's ECO Certification or Climate Action Certification programs.
- ✓ Educate your visitors on actions they can take to reduce their carbon footprint at home.

## Where can I find out more?

- GBRMPA Tourism Emissions Calculator [www.emissionscalculator.gbrmpa.gov.au/resourcedb/](http://www.emissionscalculator.gbrmpa.gov.au/resourcedb/)
- Carbon Offset Guide Australia [www.carbonoffsetguide.com.au](http://www.carbonoffsetguide.com.au)
- GBRMPA's Take Action on Climate Change [www.gbrmpa.gov.au/onboard/home/high\\_standards/climate\\_change\\_action](http://www.gbrmpa.gov.au/onboard/home/high_standards/climate_change_action)
- GBRMPA's Outlook Report 2009 [www.gbrmpa.gov.au/corp\\_site/about\\_us/great\\_barrier\\_reef\\_outlook\\_report/full\\_report](http://www.gbrmpa.gov.au/corp_site/about_us/great_barrier_reef_outlook_report/full_report)
- Carbon claims and the Trade Practices Act [www.carbonneutral.com.au/accc\\_carbon\\_claims\\_trade\\_practices\\_act.pdf](http://www.carbonneutral.com.au/accc_carbon_claims_trade_practices_act.pdf)
- Carbon Neutral, a not-for-profit organisation [www.carbonneutral.com.au](http://www.carbonneutral.com.au)

## How will customers react?

People are becoming more aware of climate change and will generally respond very positively to a carbon neutral tourism product. You could:

- Include information on your sustainability activities in your marketing material and interpretive programs.
- Offer your customers the opportunity to offset their travel emissions.



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## Case Study - Big Cat Green Island Reef Cruises Cairns

Big Cat Green Island Reef Cruises (Big Cat) operates two catamarans from Cairns to Green Island, one carrying 330 passengers and the other 130. The company provides full and half-day tours, experienced by about 130 000 passengers each year.



“We realised there was a direct link between climate change, subsequent coral bleaching and the future of our business, so we decided to take direct action to address climate change by reducing our carbon footprint,” said Kim Thomas, General Manager, Big Cat.

The company hired an external consultant to conduct a carbon audit and assist with documenting procedures. Senior management became involved and organised workshops to educate their suppliers, landlord and staff, and drive ongoing improvement.

A major component was improving the fuel efficiency of the 330 passenger vessel. Strategies included an extension of the vessel, adding purpose-built propellers, and working on engine efficiency. This investment helped the company achieve a 30 per cent saving on fuel costs and they anticipate that the cost of the changes will be recouped in about 3-4 years.

The remaining emissions were offset through Green Fleet Australia, a company that plants native trees in Australia.

### Big Cat Green Island Reef Cruises - top three benefits of becoming carbon neutral

	Annual amount before climate change action	Annual amount after climate change action
Reduced diesel fuel consumption	213 000 litres	164 000 litres
Reduced emissions from fuel	1654 tonnes CO <sub>2</sub> -e	1456 tonnes CO <sub>2</sub> -e
Reduced emissions from landfill waste	49.9 tonnes CO <sub>2</sub> -e	47.5 tonnes CO <sub>2</sub> -e

In the process of becoming carbon neutral, Big Cat became certified under Ecotourism Australia’s Climate Action Certification Program, which helped staff gain a high level of awareness and focus on climate change issues.

Thanks to this new awareness, monthly fuel and electricity accounts are now used by staff to regularly monitor emission performance. Big Cat has also put in place ongoing waste monitoring and reduction efforts, and will continue to evaluate other areas for potential gains in energy efficiency.

“One of the main advantages of being an ‘early mover’ on the issue has been the recognition of leading our industry and region on climate change action. Going forward, the business is better placed to monitor and improve climate action performance,” said Kim.

But the process has not been a smooth path. “The initial challenge was to convince owners and management of the value of the commitment, given the substantial investment and resources involved. Once the approach was agreed to, the next challenge was freeing up resources for the audit and administration processes,” Kim continues.

Looking to the future, Big Cat will continue to investigate future emission reductions through:

- Use of alternate fuel blends, including hydrogen augmentation
- Electrification of vessels (dependent on technology development and engine replacement cycles)
- Changing over to hybrid vehicles and ongoing improvements to waste reduction and recycling.

For more information on Big Cat visit [www.greenisland.com.au](http://www.greenisland.com.au).