

National Carbon Offset Standard Carbon Neutral Program Annual Report



An Australian Government Initiative

COMPANY NAME: VIRGIN AUSTRALIA

REPORTING PERIOD: 2013-2014



Public Disclosure Summary

1. Carbon neutral information

Certification is for	Virgin Australia's Fly Carbon Neutral Program. This program allows guests flying with Virgin Australia to offset the emissions attributable to their seat when booking their flight. Further details can be found on our website: http://www.virginaustralia.com/au/en/about-us/sustainability/carbon-offset-program/
Gross emissions this reporting year	38,653 t CO ₂ -e

Certification Boundary

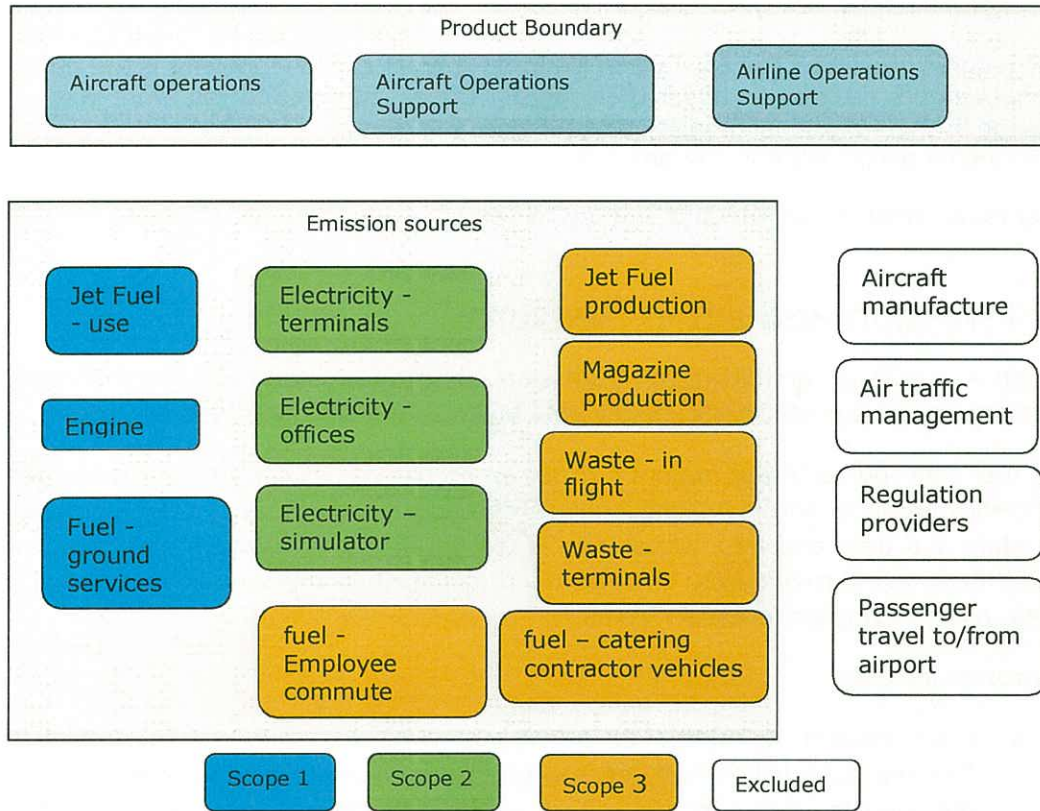
The Life Cycle Assessment applies to the operations of aircraft operated by Virgin Australia (domestic and international) including Virgin Australia Regional Airlines and Virgin Samoa regardless of location. It does not include the operation of aircraft belonging to airline partners eg Delta, Air New Zealand, Etihad and Singapore Airlines.

There are three main areas of Virgin Australia's operations that are assessed for inclusion in the Life Cycle Assessment and where greenhouse gas emissions are tallied for allocation to a particular flight. These areas are:

- Aircraft Operations
This area relates mainly to fuel burnt and in-flight catering activities;
- Aircraft Operations Support
This area includes provision of support to aircraft operations; and
- Airline Operations Support
Administration and logistics support required for the day to day operation of the airline.

Figure 1, below, illustrates the emissions that are incorporated.

Figure 1: Diagram of the boundary of the subject of certification



2. Summary of changes to the carbon footprint

The biggest impact on the Fly Carbon Neutral Program carbon footprint is the number of passengers electing to offset their flights. During this period, as there was little change in the emissions intensity of the flights the reason for the reduction was that less people participated in the program.

Flights between Melbourne and Sydney remained the most offset city pair.

3. Emission Reduction Measures

Virgin Australia is committed to addressing our climate change impacts through a combination of fuel efficiency, sustainable biofuels and carbon offsetting.

Jet fuel contributes to the majority of our emissions and is the focus of our energy efficiency program. Virgin Australia have a dedicated Fuel Efficiency team comprising of pilots and data analysts, whose role is to continually investigate and implement fuel efficiency improvements. This has been focussed on reducing the weight of the cabin by removing unnecessary items.

Measures include:

- **Fleet renewal:** As mentioned in last year Virgin Australia is in the middle of a five year \$2.5 billion fleet renewal program. We are already ahead of many of our industry peers in this regard as we already operate a young and fuel efficient fleet, with an average mainline fleet age of just 4.2 years. Maintaining a young fleet allows us to benefit from technological advancements made by manufacturers in improving the fleet efficiency.
- **Weight reduction:** The amount of jet fuel consumed is directly proportional to the weight of the aircraft. Our fuel efficiency team have been liaising with different internal departments to remove unnecessary items from the cabin area, for example, the televisions in the back of seats in domestic flights in lieu of passengers using their own or VA supplied tablets. In addition to collaborating with manufacturers to improve aircraft design, for example, winglet weight reduction.
- **Sustainable Aviation Fuel.** Virgin are actively involved in sustainable aviation fuels. During this period we continued to support the Mallee Jet Fuel project, and have been collaborating with Brisbane Airport Corporation and skyNRG in investigating sustainable aviation fuel projects.

Other measures that were implemented over this period include the introduction of mobile boarding scanners, which resulted in a 20% reduction in printed boarding passes.

4. Carbon emissions summary

A seat on any flight offered by Virgin Australia (incorporating Virgin Australia Regional Airlines) has the potential to be a carbon neutral product should the passenger wish to offset their seat emissions. The attributable scope 1 emissions (and fuel scope 3) are calculated based on the fuel usage for each offered flight route between a city-pair divided by the number of passengers travelling on that city-pair. The scope 2 and remaining scope 3 emissions, are evenly apportioned to all passengers across Virgin Australia's operations. The table below lists each of the different emissions sources included.

Table 2. Emissions Summary		
Scope	Emission source	t CO ₂ -e*
Aircraft Operations		
1	Aircraft propulsion (Jet A1 - fuel burn)	Varies per city pair
3	Aircraft propulsion (fuel extraction & distribution losses)	Varies per city pair
1	Aircraft propulsion (engine oil)	Varies per city pair
3	In-flight catering waste disposal (co-mingled)	2,303
3	In-flight magazine production (manufacture & delivery)	2,139
3	In-flight magazine (waste)	98
Aircraft Operations Support		
1	Ground Services (diesel)	2,202
1	Ground Services (kerosene)	5
1	Ground Services (ULP)	309
3	In-flight catering (diesel in delivery vehicles)	1,188
2	Airport terminal operations (electricity)	17,481
3	Airport Terminal Operations (waste)	509

Table 2. Emissions Summary		
Scope	Emission source	t CO ₂ -e*
2	Aircraft maintenance (electricity)	2,495
2	Simulator Operations (electricity)	3,002
Airline Support Operations		
3	Employee commute (petrol)	7,965
2	Head office (electricity)	2,998
3	Head office (paper usage)	66
Total Gross Emissions attributable to passengers selecting to fly carbon neutral		38,653
GreenPower or LGC reductions		0
Total Net Emissions attributable to passengers selecting to fly carbon neutral		38,653

* The tonnages listed are for Virgins total operations, the total emission from passengers selecting to participate in the Fly Carbon Neutral program is a subset of these and the fuel use associated with their flights.

5. Carbon offsets for this year

The following offsets were surrendered for this reporting period.

Table 1: Offset Cancellations

Offset type	Registry	Serial number	Quantity (t CO ₂ -e)
VCU	Markit	3357-150345123-150351882-VCU-016-MER-AU-14-1285-20102010-19102012-1	6,760
VCU	Markit	2937-129617228-129622892-VCU-018-MER-TH-13-82-01012011-31122011-0	5,665

Offset type	Registry	Serial number	Quantity (t CO ₂ -e)
VCU	Markit	2938-129657228-129667718-VCU-018-MER-TH-13-82-01092010-31122010-0	10,491
VCU	Markit	1755-72565316-72574315-VCU-008-MER-TH-4-403-01072007-31122007-0	9,000
VCU	Markit	1754-72313156-72319155-VCU-008-MER-TH-4-403-01012007-30062007-0	6,000
VCU	Markit	2324-96740733-96741469-VCU-008-MER-TH-4-403-01012008-30062008-0	737
Total			38,653

6. Declaration

To the best of my knowledge and having met the requirements of the National Carbon Offset Standard Carbon Neutral Program (NCOS CNP), the information provided in this Public Disclosure Summary is true and correct.

	<i>2/9/15</i>
Rob Wood	
Head of Sustainability, Virgin Australia	

NOT FOR PUBLIC DISCLOSURE

7. Use of Trade Mark

Virgin Australia promote the fly carbon neutral program to external stakeholders in the following formats:

Where used	Logo type
Website (www.virginaustralia.com/au/en/about-us/sustainability/carbon-offset-program)	Certified Product
2014 Annual Report (www.virginaustralia.com/au/en/about-us/sustainability/reporting/).	Certified Product