

National Carbon Offset Standard Carbon Neutral Program Public Disclosure Summary



QANTAS

Spirit of Australia




An Australian Government Initiative

QANTAS AIRLINES (FREIGHT PRODUCTS)

1 July 2014 – 30 June 2015

Declaration

To the best of my knowledge, the information provided in this Public Disclosure Summary is true and correct and meets the requirements of the National Carbon Offset Standard Carbon Neutral Program.

| | |
|---|---|
| | 29/04/2016 |
| Megan Flynn |  |
| Group Manager Environment & Carbon Strategy | |



Australian Government
Department of the Environment

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1. Carbon neutral information

Introduction

Product Description

The Qantas Group's product offering is the provision of voluntary carbon neutral freight services to both customers and staff for our freight products.

To accurately calculate the volume of emissions attributable to a tonne of freight flying a sector (from one airport to another), Qantas has undertaken a comprehensive life cycle assessment (LCA) of energy usage in flight (aviation fuel) and ground (engineering facilities, airport terminals, office and ground transport vehicles) activities. The LCA also includes the embodied energy of the aircraft flown by the airline and excludes all passenger related activity (in flight and on ground).

Passenger activities are excluded because the product offers carbon neutral services for emissions specifically attributable to the transport of freight.

The LCA will be updated each financial year. Qantas have selected emission factors that are geographically specific to the emission sources accounted for in the product LCA. There are no geographic limitations to the scope of the LCA as we are a global airline.

The objective of the LCA is to assess the emissions footprint of our customers in sufficient detail to evaluate the global warming potential attributable to the movement of a tonne of freight on a Qantas Group aircraft. An average emissions footprint per freight tonne kilometre is applied to codeshare and other non-Qantas Group flights for carbon neutral certification under the NCOS-CN program.

Using Qantas Group activity data over the previous 12 months and 'full fuel cycle' emission factors published by the Australian Government (National Greenhouse Accounts), the freight specific portion of emissions released by a given Qantas Group fleet (belly freight) and Freight specific emissions are added to the related emissions released from ground activities and divided by the total distance travelled (RFTK). The resulting emission factor is applied across all types of freight (belly freight and dedicated freighters).

Qantas Airlines

Founded in regional Queensland in 1920 – as the Queensland and Northern Territory Aerial Service – Qantas is one of Australia's most iconic brands and has played a central role in the development of the Australian and international aviation industry.

Today the Qantas Group is a diverse global aviation business, comprising Qantas Domestic, Qantas International, the Jetstar low-cost carrier group and Qantas Loyalty.

In total, the Qantas Group operates more than 7,300 flights each week and, together with its codeshare and oneworld partners, offers flights to more than 1000 destinations around the world.

The Qantas Group's fleet numbers 292 aircraft with an average age of 7.6 years – the youngest in two decades – including the acclaimed Qantas A380 and the Jetstar Boeing 787 Dreamliner.

Qantas is ranked the world's safest airline by AirlineRatings.com, the best airline in the Australia-Pacific by Skytrax, and holds many major awards for service, food and wine, technology and innovation.

The Qantas Group carries 47 million passengers each year and employs more than 30,000 people.

Qantas Freight has three streams:

1. Dedicated ground freight (Qantas Express)
2. Dedicated domestic and international freight (Qantas Freight)
3. Freight carried in domestic and international passenger aircraft (Belly freight carried on both Jetstar and Qantas).

This LCA covers the emissions from all three streams of Qantas freight operations.

Functional Unit

The functional unit is the transport of one tonne of freight expressed in tonnes CO₂-e per tonne kilometre based on the ground transport of freight in Australia (Qantas Express) and freight transport on aircraft within and outside of Australia (Qantas Freight and belly freight transported on Qantas and Jetstar passenger aircraft). The functional unit does not include the transport of freight to and from the aircraft at international ports. Note that the resulting emission factor is to be applied across all freight including belly freight and freight transported on Qantas dedicated freight services (ground and air).

The LCA has been prepared in accordance with the NCOS-CN Guidelines and in accordance with international standards ISO 14040:2006 and ISO 14044:2006.

Greenhouse gases considered

Greenhouse gases considered include carbon dioxide, nitrous oxide and methane and relevant refrigerants.

Consolidation Approach

An operational consolidation approach has been used and includes the entities shown in Figure 1. It should be noted that the organisational diagram represents the reporting structure for the purpose of NCOS accreditation and does not reflect the legal corporate structure of the Qantas Group:

Figure 1: Organisational diagram representing the reporting structure for the purpose of NCOS accreditation.



* These organisation's activities have been excluded from the carbon footprint assessment that forms the basis for calculating emissions per passenger-kilometre rates that are subsequently used to estimate emissions per passenger for each sector (from airport to another) the product is offered (see section 3).

Emission sources within certification boundary

Quantified sources

Emission sources quantified include:

- Kerosene (Stationary and transport) – Scope 1 and 3
- Diesel (stationary and transport) – Scope 1 and 3
- Gasoline (transport) – Scope 1 and 3
- LPG (stationary and transport) – Scope 1 and 3
- Natural gas (transport) – Scope 1 and 3
- Electricity – Scope 2 and 3
- Waste (Commercial and Industrial)- Scope 3
- Embodied energy of aircraft – Scope 3

Non-quantified sources

The following emission sources have not been quantified in line with the provisions in the NCOS. The impact of excluding these sources is not expected to affect the overall total emissions.

| Emission source | Scope | Justification for exclusion & overall implications for footprint |
|---|---------|---|
| Office Paper | 3 | It is expected these emissions are negligible (relative to other Scope 3 emissions) and the administrative burden involved in collating the data is considered to outweigh the benefit. Qantas purchases carbon neutral office paper. |
| Ground fuels at international ports | 1 and 3 | Ground fuels at international ports are considered to be immaterial and are beyond Qantas' operational control |
| International scope 2 emissions | 2 | International scope 2 emissions are deemed immaterial and beyond operational control |
| International scope 3 emissions (except for fuel burn and embodied energy related emission sources) | 3 | International scope 3 emissions are deemed immaterial and beyond operational control |
| Airline Related Business Travel | 2 & 3 | The Qantas Group offsets all employee and contractor business travel. Since our corporate travel is offset, we exclude business travel from our emissions profile to prevent double counting |

Emission sources within certification boundary

Quantified sources

Organisation Boundary

The Qantas Group

Emission sources



2. Emissions reduction measures

Part A. Emissions over time

| Table 1. Emissions since base year | | |
|--|------------------|---------------|
| | Base Year (2013) | 2015 |
| Scope 1 | 2,404,052 | 1,747,144 |
| Scope 2 | 4,489 | 8,771 |
| Scope 3 | 184,275 | 141,680 |
| Total | 2,592,816 | 1,897,595 |
| Revenue Freight Tonne Kilometers (RFTK) | 2,609,611,015 | 1,917,773,884 |
| Emissions intensity (kg CO ₂ -e per tonne km) | 0.994 | 0.989 |

Part B. Emissions reduction strategy

At Qantas, we believe all businesses have a responsibility to continually reduce their environmental footprint. We take this responsibility seriously because we recognise the impact our business has on the environment. By positioning environmental sustainability at the core of our business we are able to implement programs that reduce our impact and drive greater efficiencies across all aspects of how we operate.

Our environmental philosophy to measure, reduce, offset and influence forms the basis of our key sustainability initiatives.

Qantas comprehensively evaluates our total impact under the NGERS framework. Our dedicated fuel efficiency team and continual fleet renewal are our most material emissions reduction activity. We also actively monitor and reduce our energy and water consumption on the ground, and the waste we send to landfill. We set, monitor and evaluate our progress against rigorous targets for our emissions on a yearly basis – which can be found on our website at Qantas.com/environment

Qantas is an active participant in the biofuel research and development community, and is working with key stakeholders to develop commercially viable aviation biofuels which could reduce our emissions by up to 80%.

However, in the near to medium term, there is no viable alternative to petroleum based jet fuel for the aviation industry. As such, carbon offsetting has and will continue to play a key role in Qantas' emissions reduction strategy. We offset all employee and contractor business travel, and have the largest voluntary offset program in the world – *Fly Carbon Neutral*. Since the program's inception in 2009, our customers have offset the volume of Sydney Harbour twice – over two million tonnes of carbon dioxide.

Qantas supports the International Civil Aviation Organisation's ('ICAO') commitment to achieve carbon neutral growth at an industry level from 2020 onwards, and the aspirational goal to achieve a 50% reduction in net emissions by 2050 based on 2005 emissions.

Finally, we seek to engage our customers, investors, employees and partners to take proactive steps to assess and reduce their environmental footprint, and work with us to generate positive environmental and social outcomes.

Part C. Emissions reduction actions

Fuel efficiency and fleet renewal offer the greatest opportunities to decrease aviation fuel use. Qantas and Jetstar have a young average fleet age of 7.6 years, which is very low compared to our we anticipate will decrease in the next few years as new, efficient planes such as the Boeing 787-9 Dreamliner enter the fleet. As part of the Qantas Transformation program, we have accelerated and centralised our fuel efficiency program. We expect to deliver improvements in our group fuel efficiency each year as a result of this new initiative.

3. Emissions summary

| Scope | Emission source | t CO ₂ -e |
|-------|---|----------------------|
| 1 | Kerosene for use in a aircraft | 1736232 |
| 1 | Transport diesel –post 2004 vehicles | 9,487 |
| 1 | Transport petrol-post 2004 vehicles | 126 |
| 1 | Transport LPG - post 2004 vehicles | 26 |
| 1 | Stationary LPG | 57 |
| 1 | Stationary Diesel | 144 |
| 1 | Kerosene (other than for use as fuel in an aircraft) | 15 |
| 1 | Natural gas light vehicle | 1,057 |
| 2 | Purchased electricity NSW and ACT | 2,952 |
| 2 | Purchased electricity VIC | 4,021 |
| 2 | Purchased electricity QLD | 1,789 |
| 2 | Purchased electricity SA | 9 |
| 3 | Kerosene for use in an aircraft | 134,548 |
| 3 | Transport diesel – post 2004 vehicles | 719 |
| 3 | Transport petrol-post 2004 vehicles | 10 |
| 3 | Transport LPG – post 2004 vehicles | 0.1 |
| 3 | Stationary LPG | 5 |
| 3 | Stationary diesel | 11 |
| 3 | Kerosene (other than for use as fuel in an aircraft) | 0.03 |
| 3 | Natural gas distributed in a pipeline - Metro NSW and ACT | 85 |
| 3 | Natural gas distributed in a pipeline - Metro VIC | 47 |
| 3 | Purchased electricity | 446 |
| 3 | Purchased electricity VIC | 511 |
| 3 | Purchased electricity QLD | 287 |
| 3 | Purchased electricity SA | 2 |
| 3 | Waste - commercial and industrial | 634 |

| Table 2. Emissions Summary | | |
|--|-----------------------------|----------------------|
| Scope | Emission source | t CO ₂ -e |
| 3 | Embodied Energy of Aircraft | 4,316 |
| Total Gross Emissions | | 1,897,536* |
| Total Net Emissions | | |
| *Data in this table has been rounded resulting in a slightly lower (1 tonne CO ₂ -e) gross total emissions compared to the modelled value | | |

4. Carbon offsets

Part A. Offsets summary

As this is a new offering to Qantas freight customers, no freight emissions have been offset and no offsets have been purchased

Part B. Offsets purchasing and retirement strategy

The Qantas Group does not and has no plans to purchase and hold carbon credits under NCOS-CN. The Qantas Group will purchase and retire carbon offsets in the same manner as we do through for our passenger offset program.

Part C. Offset projects (Co-benefits)

Qantas has a comprehensive offset procurement policy that preferences offset projects with social and environmental outcomes beyond carbon reductions. Qantas purchases Australian abatement where possible and supports indigenous enterprise in our carbon reduction activities.