National Carbon Offset Standard
Carbon Neutral Program
Public Disclosure Summary

Spirit of Australia

An Australian Government Initiative

QANTAS AIRLINES (PASSENGER PRODUCT)

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

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1. Carbon neutral information

Introduction

Product Description

The Qantas Group's product offering is the provision of voluntary carbon neutral passenger services to both our customers and employees.

To assess the volume of emissions attributable to a passenger 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 on the ground (catering centres, engineering facilities, airport terminals, office and ground transport vehicles). The LCA includes the embodied energy of the aircraft flown by the airline, but excludes all Qantas Freight related activity (in flight and on the ground).

Freight activities are excluded because the product offers carbon neutral services for emissions only attributable to passenger travel. Qantas offers a separate carbon neutral Freight product for our customers.

The LCA is 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 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 a passenger travelling on a Qantas Group aircraft. An average emissions footprint per passenger 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 passenger's specific portion of emissions released by a given Qantas Group fleet are added to the related emissions released from ground activities and divided by the total distance travelled. For Qantas Group sectors, these rates are weighted by the aircraft used on that sector as well as distance travelled.

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 diversified 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.

Functional Unit

The functional unit for domestic travel is the transport of a single passenger over a specified distance from entry into the airport terminal at origin to exiting the airport terminal (i.e., tonnes CO2-e per passenger-kilometre).

For international travel the functional unit is the transport of a single passenger over a specified distance from entry into an Australian airport terminal at origin to exiting the aircraft at an international port. Similarly for the return trip to Australia, the functional unit is the transport of a single passenger over a specified distance from entry into the aircraft at an international port to exiting at an Australian airport terminal (expressed in tonnes CO2-e per passenger-kilometre).

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.

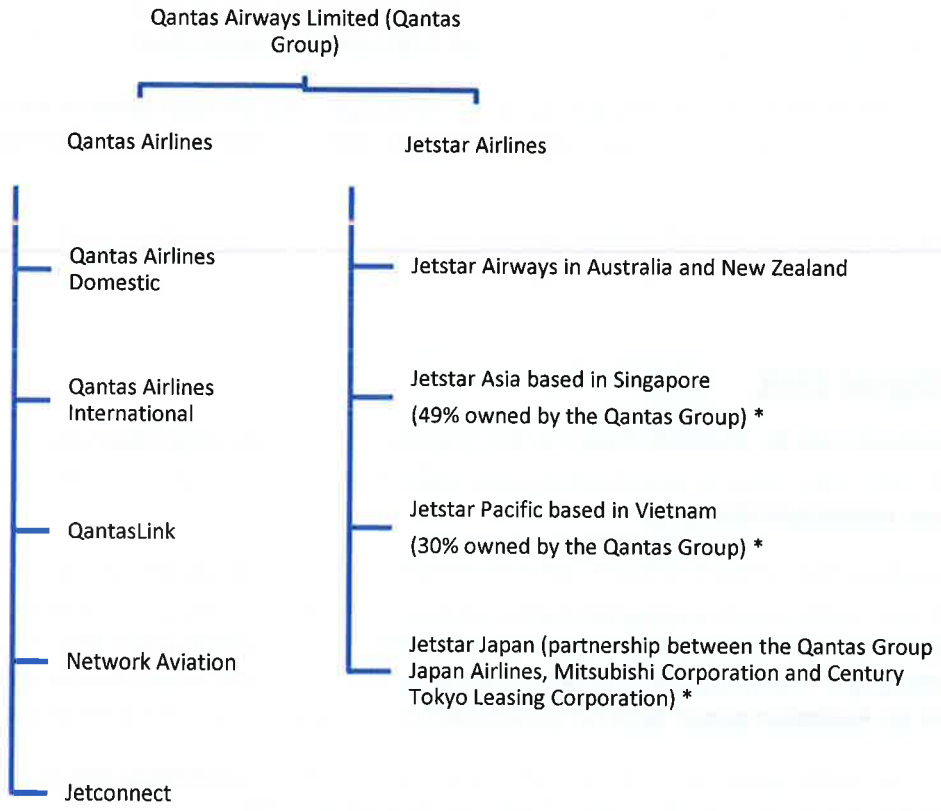
Greenhouse gases considered

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). These organisations do not form part of the CN program. Business travel has also been excluded as it is offset separately by Qantas and Jetstar.

Emission sources within certification boundary

Quantified sources

Emission sources quantified include:

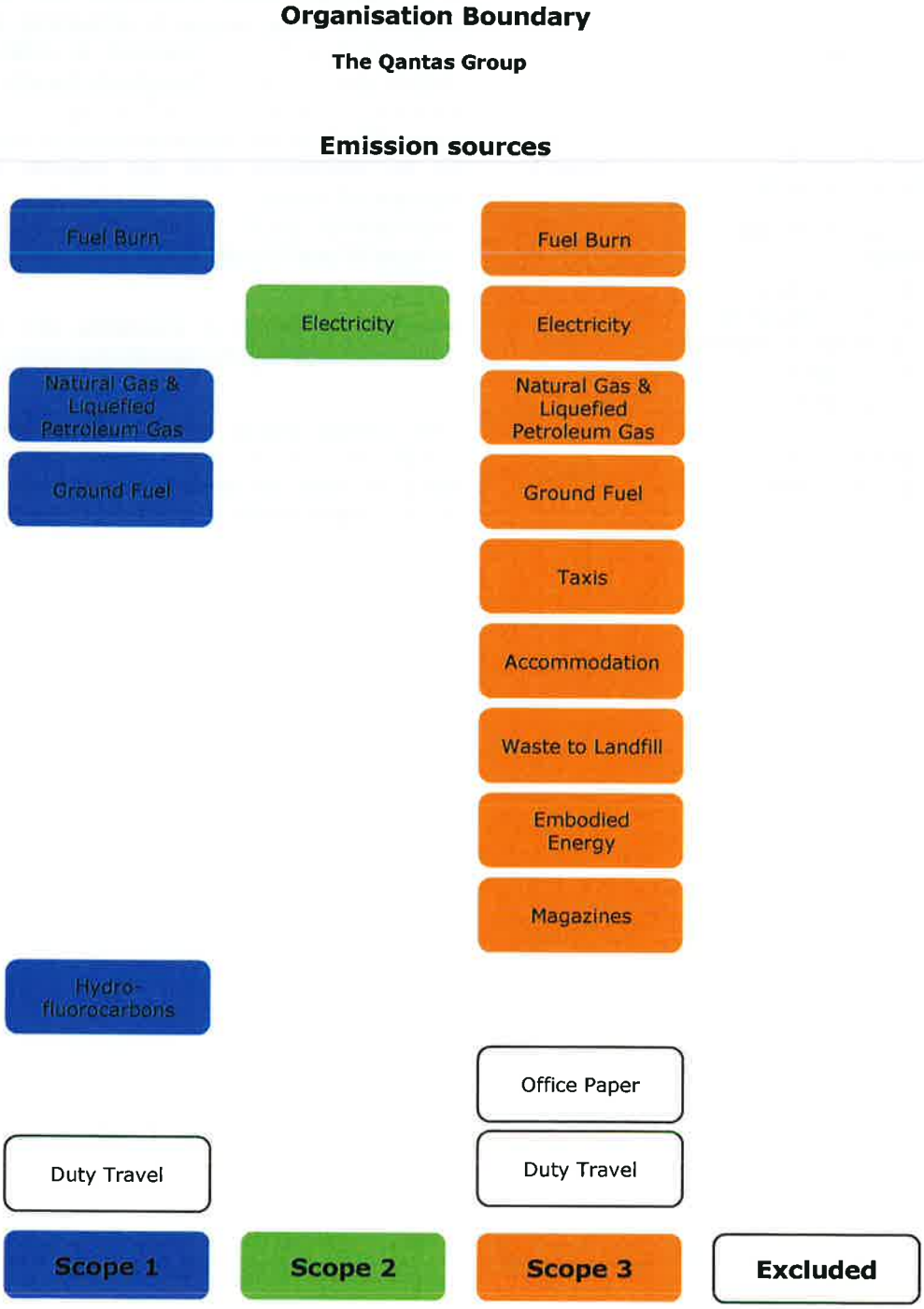
- Kerosene (Stationary and transport) – Scope 1 and 3
- Diesel (stationary and transport) – Scope 1 and 3
- Gasoline (transport) – Scope 1 and 3
- LPG (stationary and transport) – Scope 1 and 3
- Natural gas (stationary and transport) – Scope 1 and 3
- Electricity – Scope 2 and 3
- Refrigerants – Scope 1
- Accommodation and Taxis – Scope 3
- Waste (Food and 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

Diagram of certification boundary



2. Emissions reduction measures

Part A. Emissions over time

Table 1. Emissions since base year

	Base Year (2012/13)	2015
Scope 1	12,410,247	9,960,115
Scope 2	221,026	147,056
Scope 3	1,039,742	878,714
Total	13,671,015 t CO2-e	10,985,885 t CO2-e
Emissions/PAX (kg CO2-e/PAX-km)	0.134	0.104

*PAX-km - Revenue passenger kilometres (RPK) is a measure of the volume of passengers carried by an airline. A revenue passenger-kilometre is flown when a revenue passenger is carried one kilometre

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

Table 2. Emissions Summary

Scope	Emission source	t CO_2-e
1	Kerosene for use in a aircraft	9931168
1	Transport diesel –post 2004 vehicles	9793
1	Transport petrol-post 2004 vehicles	729
1	Stationary LPG	1359
1	Natural gas distributed in a pipeline	15278
1	Kerosene (other than for use as fuel in an aircraft)	589
1	Refrigerant	140
1	Refrigerant	1057
2	Purchased electricity NSW and ACT	31963
2	Purchased electricity NSW (trigeneration)	28227
2	Purchased electricity VIC	45912
2	Purchased electricity QLD	29205
2	Purchased electricity SA	1320
2	Purchased electricity WA	9537
2	Purchased electricity TAS	278
2	Purchased electricity NT	613
3	Kerosene for use in an aircraft	769610
3	Transport diesel –post 2004 vehicles	743
3	Transport petrol-post 2004 vehicles	56

3	Stationary LPG	113
3	Kerosene (other than for use as fuel in an aircraft)	46
3	Natural gas distributed in a pipeline - Metro NSW and ACT	2128
3	Natural gas distributed in a pipeline - Metro VIC	350
3	Natural gas distributed in a pipeline - Metro QLD	178
3	Natural gas distributed in a pipeline - Metro WA	84
3	Purchased electricity	4832
3	Purchased electricity VIC	5836
3	Purchased electricity QLD	4687
3	Purchased electricity SA	238
3	Purchased electricity WA	878
3	Purchased electricity TAS	42
3	Purchased electricity NT	90
3	Food waste	21131
3	Waste - commercial and industrial	23191
3	Embodied Energy of Aircraft	31428
3	Magazines	1687
3	Accommodation	10567
3	Taxi	798
Total gross emissions (Qantas Group)		**10,985,885 tonne CO_2-e**
Emissions from CN passenger product		**134,131 tonne CO_2-e**
Total Net Emissions after offset		0 tonne CO_2-e[1]

[1] The total net emissions are not the carbon offset cancellations required in the context of the product offering. As aforementioned, the goal of the LCA is to assess an emissions footprint in sufficient detail that supports the global warming potential attributable to a passenger on a Qantas Group and/or an average emissions footprint per distance kilometre to be applied to codeshare and other non-Qantas Group flights for carbon neutral certification under the NCOS-CN program.

Therefore, the total net emissions coupled with the total passenger-kilometres travelled by the Qantas Group, provides the following updated functional unit (average emissions footprint per distance kilometre):

Passenger-Kilometres [pax-km]	105,982,000,000
Total Net Emissions [t CO2-e]	10,985,885
Functional Unit [kg CO2-e per pax-km]	**0.104**

A further process is undertaken to calculate sector specific emission factors (e.g Sydney to Melbourne) which are a function of the sector distance and the fleet utilisation for that route.

The values calculated for each sector based on the FY15 LCA will be applied to carbon offsets purchased in FY16. The values calculated for each sector based on the FY14 LCA have been applied to the purchase of offsets in 2015. It should be noted that offsets are purchased in arrears.

The total tonnes of carbon neutral flights sold (**134,131** tonnes CO2-e) equate the total offsets purchased. A further **37,765** tonnes CO2-e of offsets were purchased to offset Qantas' own business travel.

4. Carbon offsets

Part A. Offsets summary

Table 3. Offsets Summary

Offset type and registry	Year retired	Quantity	Serial numbers
VCU APX VCS Registry	2014	10410	2759-119527828-119538237-VCU-008-MER-TH-4-403-01012010-31122010-0
VCU APX VCS Registry	2014	1041	3092-136944214-136945254-VCU-006-MER-PR-14-868-01012010-31122012-0
VCU APX VCS Registry	2014	1735	2657-116654816-116656550-VCU-016-MER-AU-14-587-01032011-29022012-0
VCU APX VCS Registry	2014	2429	2285-95261616-95264044-VCU-008-MER-KH-3-181-01012011-31122011-0
VCU APX VCS Registry	2014	7634	3641-160366361-160373994-VCU-016-APX-PG-14-1122-22052009-31122012-0
VCU APX VCS Registry	2014	11453	3633-160285937-160297389-VCU-010-APX-CN-1-970-30062011-31122011-0
VCU APX VCS Registry	2015	9471	3633-160297390-160306860-VCU-010-APX-CN-1-970-30062011-31122011-0
VCU APX VCS Registry	2015	9491	2759-119538239-119547729-VCU-008-MER-TH-4-403-01012010-31122010-0
VCU APX VCS Registry	2015	970	3634-160306861-160307830-VCU-010-APX-CN-1-970-01012012-30062012-0
VCU APX VCS Registry	2015	1	2759-119538238-119538238-VCU-008-MER-TH-4-403-01012010-31122010-0

Table 3. Offsets Summary

Offset type and registry	Year retired	Quantity	Serial numbers
VCU APX VCS Registry	2015	6961	3813-165719383-165726343-VCU-016-APX-PG-14-1122-22052009-31122012-0
VCU APX VCS Registry	2015	2215	2285-95264150-95266364-VCU-008-MER-KH-3-181-01012011-31122011-0
VCU APX VCS Registry	2015	1582	2646-115070017-115071598-VCU-016-MER-AU-14-641-01072011-15042012-0
VCU APX VCS Registry	2015	400	3352-150154132-150154531-VCU-006-MER-PE-14-868-01012010-31122012-0
VCU APX VCS Registry	2015	292	3563-158189499-158189790-VCU-006-MER-PR-14-868-01012010-31122012-0
VCU APX VCS Registry	2015	257	3092-136945255-136945511-VCU-006-MER-PE-14-868-01012010-31122012-0
CER CDM Project 3306	2015	22370	Serial Numbers: 514596712 - 514619082
VCU APX VCS Registry	2015	14645	2759-119562152-119576796-VCU-008-MER-TH-4-403-01012010-31122010-0
VCU APX VCS Registry	2015	5692	2759-119547730-119553421-VCU-008-MER-TH-4-403-01012010-31122010-0
VCU APX VCS Registry	2015	14914	4111-175132218-175147131-VCU-016-APX-PG-14-1122-22052009-31122-12-0
VCU APX VCS Registry	2015	208	2657-116656726-116656933-VCU-016-MER-AU-14-587-01032011-29022012-0
VCU APX VCS Registry	2015	450	2646-115079401-115079850-VCU0016-MER-AU-14-641-01072011-15042012-0

Table 3. Offsets Summary

Offset type and registry	Year retired	Quantity	Serial numbers
VCU APX VCS Registry	2015	329	2657-116650403-116650731-VCU-016-MER-AU-14-587-01032011-29022012-0
VCU APX VCS Registry	2015	618	2646-115072899-115073516-VCU-016-MER-AU-14-641-01072011-15042012-0
VCU APX VCS Registry	2015	1784	3291-148261678-148263461-VCU-016-MER-AU-14-641-16042012-15042013-0
VCU APX VCS Registry	2015	3000	1462-61850101-61853100-VCU-008-CDC-KH-3-181-01012010-31122010-0
VCU APX VCS Registry	2015	1745	2285-95267487-95269231-VCU-008-MER-KH-3-181-01012011-31122011-0
VCU APX VCS Registry	2015	2034	3352-150215679-15017712-VCU-006-MER-PE-14-868-01012010-31122012-0
Total offsets retired			134,131
Net emissions			10,851,754 (total emissions less offsets retired)
Total offsets held in surplus for future years:			0

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. This reporting year, a preliminary assessment of uptake for voluntary carbon offsets was communicated to the voluntary carbon offsets' supplier. The supplier then prepared a portfolio that was, once approved by Qantas, purchased and retired (assigned to Qantas).

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.