

**Module: Introduction****Page: Introduction****0.1****Introduction**

**Please give a general description and introduction to your organization**

Founded in the Queensland outback in 1920, Qantas has grown to be Australia's largest domestic and international airline. Registered originally as the Queensland and Northern Territory Aerial Services Limited (QANTAS), Qantas is widely regarded as the world's leading long distance airline and one of the strongest brands in Australia. We have built a reputation for excellence in safety, operational reliability, engineering and maintenance, and customer service. The Qantas Group's main business is the transportation of customers using two complementary airline brands - Qantas and Jetstar. We also operate subsidiary businesses including other airlines, and businesses in specialist markets such as Qantas Holidays and Q Catering. Our airline brands operate regional, domestic and international services. The Group's broad portfolio of subsidiary businesses ranges from Qantas Freight Enterprises to Qantas Frequent Flyer. We employ 35,700 people with 93 per cent of them based within Australia.

**0.2****Reporting Year**

**Please state the start and end date of the year for which you are reporting data.**

**The current reporting year is the latest/most recent 12-month period for which data is reported. Enter the dates of this year first.**

**We request data for more than one reporting period for some emission accounting questions. Please provide data for the three years prior to the current reporting year if you have not provided this information before, or if this is the first time you have answered a CDP information request. (This does not apply if you have been offered and selected the option of answering the shorter questionnaire). If you are going to provide additional years of data, please give the dates of those reporting periods here. Work backwards from the most recent reporting year.**

**Please enter dates in following format: day(DD)/month(MM)/year(YYYY) (i.e. 31/01/2001).**

Enter Periods that will be disclosed

Thu 01 Jul 2010 - Thu 30 Jun 2011

**0.3****Country list configuration**

**Please select the countries for which you will be supplying data. This selection will be carried forward to assist you in completing your response**

Select country

Australia

**0.4**

## Currency selection

Please select the currency in which you would like to submit your response. All financial information contained in the response should be in this currency.

AUD (\$)

---

### 0.5

Please select if you wish to complete a shorter information request

---

### 0.6

#### Modules

As part of the Investor CDP information request, electric utilities, companies with electric utility activities or assets, companies in the automobile or auto component manufacture sectors and companies in the oil and gas industry should complete supplementary questions in addition to the main questionnaire.

If you are in these sectors (according to the Global Industry Classification Standard (GICS)), the corresponding sector modules will be marked as default options to your information request. If you want to query your classification, please email [respond@cdproject.net](mailto:respond@cdproject.net).

If you have not been presented with a sector module that you consider would be appropriate for your company to answer, please select the module below. If you wish to view the questions first, please see <https://www.cdproject.net/en-US/Programmes/Pages/More-questionnaires.aspx>.

---

## Further Information

### Module: Management [Investor]

#### Page: 1. Governance

---

### 1.1

Where is the highest level of direct responsibility for climate change within your company?

Individual/Sub-set of the Board or other committee appointed by the Board

---

#### 1.1a

Please identify the position of the individual or name of the committee with this responsibility

The Board's Committee for Health, Environment, Safety and Security (CHESS)

The CHESS Committee has overall responsibility for climate change related issues.

The company's progress and status with regard to climate change and other environmental issues are reviewed three times a year at CHESS meetings and at Qantas Board meetings.

Internal reports are provided by Management to the Board through the quarterly Qantas Board Risk report and quarterly CHESS reports.

**1.2**  
**Do you provide incentives for the management of climate change issues, including the attainment of targets?**

Yes

**1.2a**  
**Please complete the table**

Who is entitled to benefit from these incentives?	The type of incentives	Incentivised performance indicator
Management group	Monetary reward	Sustainability risk management is governed by the Board of Directors and is reinforced through explicit performance targets. Performance Incentive Plans are in place for relevant executives that are assessed against an appropriate balance of Group and business segment measures and financial and non-financial measures. For some executives environmental and GHG performance is part of the tailored business specific measures. KPI: Fuel efficiency target, GHG performance, Energy performance targets, financial & non-financial measures
All employees	Monetary reward	To encourage employee engagement in environmental sustainability, a number of employee reward and recognition schemes are in place. The annual Environmental Excel Award program provides recognition and financial incentives for environmental improvement initiatives. In FY2011, Qantas in conjunction with the Great Barrier Reef Foundation also rewarded selected employees who delivered environmental improvements with a visit to the Great Barrier Reef to research the tangible impacts of climate change. These employees have become internal 'Ambassadors' on the issue. KPI: Projects that have raised awareness and demonstrated a measurable benefit in improving the environmental performance of Qantas (reduction in emissions, waste, resource consumption, noise, air quality, soil or water).

**Further Information**

**Page: 2. Strategy**

**2.1**  
**Please select the option that best describes your risk management procedures with regard to climate change risks and opportunities**

Integrated into multi-disciplinary company wide risk management processes

**2.1a**  
**Please provide further details (see guidance)**

i. Scope of risk management process

All risks related to climate change are considered as part of the Group's enterprise risk management framework. Risks and actions to manage these risks are identified by all of the Group's business units as well as the corporate Group Environment department. Any material risks that emerge as part of this process are integrated into the Group's risk register. The focus of our climate change risk management is on, but not limited to:

1) Environmental impacts

- fuel use
- energy use
- waste to landfill

2) Regulatory risks

- carbon price
- emissions reporting legislation
- fuel/energy taxes and regulations

3) Physical risks

- induced changes in natural resources
- tropical cyclones and floods
- changes in weather patterns

4) Reputational and consumer behaviour related risks

ii. Assessment of risks and opportunities at a company level

The assessment of risks and opportunities at a Group level is subject to systematic assessment and reviewed by the Group Environment Department in conjunction with the Internal Audit and Risk department to ensure the controls in place are appropriate to minimise financial, operational and reputation exposure to the Group.

This process is guided primarily by:

1) The Qantas Enterprise Risk Management (ERM) Framework

All risks, including climate change risks, are identified through the Qantas ERM framework. This process is governed by the Board. Under this framework, climate change forms one of the long-term material risk categories for the Group.

2) The Qantas Risk Management Policy

The Qantas Group Risk Management Policy sets out the requirements and responsibilities for risk management across the Qantas Group. The policy is reviewed and updated on an annual basis or as required.

iii. Assessment of risks and opportunities at an asset level

Risks and opportunities relating to climate change are formally identified and reviewed by individual business units at an asset level as well as by Group Environment and Resilience which has Group-wide oversight. Each business unit as part of the Group's environmental management system maintains an environmental aspects and impacts register detailing the risks of operation as well as the management of any impacts. Risk ratings are escalated to the Group Risk Register using the Qantas Group Risk Assessment Guide. Formalised reviews of the aspects register and management plans are regularly conducted.

iv. Frequency of monitoring

In partnership with Internal Audit and Risk, Group Environment monitors climate change risks and opportunities on a monthly basis. The Group Risk Report is reviewed twice a year and the risk management framework quarterly by the Board's Audit Committee. On an annual basis, the Qantas Board and Audit Committee reviews sustainability (including climate change) progress as part of approving the Qantas Annual Report and Sustainability Reports.

v. Criteria for materiality

All risks are managed through the Qantas Group Risk Assessment Guide (QRAG). Risks are categorised as very low to catastrophic. A likelihood and consequence matrix is used to determine these risk categories. Identified risks are placed on a Qantas Group Risk Register. High and extreme risks are reported to Executive Management monthly and to the Board of Directors quarterly.

The Risk Assessment Guide is designed to:

- provide guidance on applying the Qantas Group Risk Management Policy; and
- assist areas to comply with the requirements of the "Risk assessment and mitigation" element contained within the Group management system.

The financial consequence rating provides guidance on material impacts to the Group's operations. Existing management controls are focussed on minimising financial risk whilst providing opportunities to improve overall competitiveness.

vi Communication of results

The Group governance structure facilitates the monitoring, oversight and escalation of risks to Executive Management and the Board. Business units actively communicate material business risks in accordance with the governance structure. All material risks are reported to the Board quarterly.

---

## 2.2

### Is climate change integrated into your business strategy?

Yes

---

#### 2.2a

##### Please describe the process and outcomes (see guidance)

i. Process by which the strategy is influenced by climate change

The Qantas Group is committed to reducing its emissions. The Qantas Group's Environment strategy outlines the goal of being recognised as a leading airline group committed to environmental sustainability. Measures to mitigate climate change are a core focus of the Group's strategy.

The Group Environment Strategy is developed through input from business units across the Group with cooperation from the Group Environment Department.

Initiatives are designed to capitalise on the potential opportunities as well as effectively managing any risks. All of the strategic initiatives are evaluated against external drivers including impending carbon pricing, the rising price of fuel, and the sustainability of the current business model. The comprehensive strategy is designed to position the Group as a leading airline in environment, customer, financial and climate change management.

ii. Climate change aspects that have influenced the strategy

The Group's comprehensive strategy recognises that the business is global in nature and articulates key strategic levers that underpin our environmental performance and commitment to reducing our carbon footprint, including both external climate change-related aspects as well as internal drivers.

External drivers include the rapidly changing regulatory landscape around carbon management, including emissions trading schemes being developed and introduced in Australia, the EU and New Zealand, the need to manage the growing footprint of aviation emissions as well as changing expectations of customer, investors and other stakeholders.

The strategy outlines 4 key focus areas: 1) Continuous improvement in environmental operational efficiency, 2) early adoption and persistence in innovative fuel and carbon management, 3) embedding environmental values to increase marketability and strengthen belief in the brand, and 4) influencing global regulators to achieve sustainable lowest cost carbon compliance.

iii. Short term strategy changes (1-8 years)

The Group has set a fuel efficiency target and is on track to achieve an average fuel efficiency improvement of 1.5% per annum to 2020 which is aligned with the goal set by International Air Transport Association (IATA) for the industry. This approach also achieves performance benchmarks that improve the overall profitability of the business. This enables a lower cost of compliance under the EU, AUS and NZ carbon pricing schemes, as well as meeting customer expectations of performance and responsibility. The Group's strategy also outlines the Group's approach to engaging in carbon pricing mechanism developments at both a local and global level over the next 3 years. The short term strategy also directs activities over the next 1-3 years focused on lowering operational costs while improving environmental performance.

iv. Long term strategy changes (5-40 years)

As a member of IATA, the Qantas Group has endorsed the IATA's stated vision to achieve carbon neutral growth from 2020 and to reduce emissions by 50 per cent by 2050. A component of this strategy is the development of Sustainable Alternative Fuels, however to achieve genuine sustainability it is essential that such fuels deliver both cost and environmental benefits.

v. Strategic advantage

The Qantas Group is one of the largest fuel users in Australia, consuming 4.6 billion litres of jet kerosene in 2009/2010 (a cost of \$3.3 billion). This scale provides strategic advantages in influencing and developing alternative fuel value chains.

The Group's strategy is designed to enable the Group to achieve a competitive advantage in operational and compliance costs, especially by creating a point of differentiation with customers and enabling the business to adapt to changing environmental and regulatory landscapes.

-vi. Substantial business decisions

Climate change has increasingly become a deciding factor in substantial business decisions as regulatory, physical and reputation aspects become more of a risk to

our business. Examples of substantial decisions include:

- Investment decisions around carbon procurement to manage both customer voluntary and compliance requirements.
- Fleet investment decisions to provide ongoing fuel efficiency improvements for the Group.
- Resources dedicated to incentivising a Sustainable Aviation Fuels (SAF) industry that will provide a low carbon sustainable alternative to fossil fuels.
- Emissions reductions targets to lower emissions by 50% by 2050
- Public policy engagement such as participation in the Australian government's Business Roundtable on Climate Change

---

## 2.3

### Do you engage with policy makers to encourage further action on mitigation and/or adaptation?

Yes

---

## 2.3a

### Please explain (i) the engagement process and (ii) actions you are advocating

Engagement with policy makers is an important part of our business decision making process and is embedded in our strategy as one of our four key strategic outcomes.

#### i. Nature & method of engagement

Engagement has included, but is not limited to participation in consultation programs, attendance at government facilitated workshops and direct engagement with government agencies and policy makers both within Australia and internationally.

#### ii. Topic of engagement

Qantas is actively engaged with policy makers in many jurisdictions (including the European Union, Australia and New Zealand) on the issue of carbon pricing and complementary policies that will accelerate our transition to lower emissions. We will continue to press for harmonised schemes that create a level playing field for all participants.

We are also in regular dialogue regarding the opportunities and barriers to introduce lower carbon technologies such as alternative fuels and effective and efficient use of aircraft navigational equipment. We are also advocating for the continued improvement in the sustainability of the tourism industry.

#### iii. Actions advocated

Qantas supports carbon pricing policies that are cost effective, avoid competitive distortions and deliver tangible emission reductions.

Qantas supports the Australian Government's decision to introduce a carbon pricing framework from mid 2012. We believe this is important to provide certainty for Australian businesses. However, we believe there is still more work to be done on the details of the scheme to make it environmentally and cost effective for Australian industries including aviation.

A global model for regulating aviation emissions, as advocated by the International Air Transport Association (IATA), would be the best possible approach. In the absence of such a multilateral framework, we accept that individual governments will introduce their own policies.

We have and will continue to advocate for the establishment of emission reduction technologies including the establishment of an Australian based low carbon aviation fuel industry and for greater use of the efficient aircraft navigational technology.

Through engagement with government and tourism bodies we are incentivising the sustainable tourism practices to become mainstream activities in Australia.

---

## Further Information

Did you have an emissions reduction target that was active (ongoing or reached completion) in the reporting year?

Intensity target

### 3.1b

Please provide details of your intensity target

ID	Scope	% of emissions in scope	% reduction from base year	Metric	Base year	Normalized base year emissions	Target year	Comment
	Scope 1	100%	16.5%	Other: metric tonnes per Revenue Tonne Kilometer	2009	12027918	2020	Target is to improve fuel efficiency per revenue tonnes kilometres by 16.5% by 2020.
	Scope 2	100%	10%	Other: MWh	2009	224024	2020	Target is to reduce electricity consumption by 10% by 2020
	Scope 3: Waste generated in operations	100%	20%	Other: tonnes	2009	28105	2020	Target is to reduce waste to landfill 20% by 2020.

### 3.1c

Please also indicate what change in absolute emissions this intensity target reflects

ID	Direction of change anticipated in absolute Scope 1+2 emissions at target completion?	% change anticipated in absolute Scope 1+2 emissions	Direction of change anticipated in absolute Scope 3 emissions at target completion?	% change anticipated in absolute Scope 3 emissions	Comments
	Decrease	0	Decrease	20	Whilst we are targeting an improvement in our fuel efficiency the change in absolute emissions will also be impacted by: Growth of available seat kilometres, growth of demand for air travel, extent of commercialisation of Sustainable Aviation Fuels, and Government Climate Change Policy decisions. However our Scope 2 emissions (only) are expected to reduce by 10% at target completion, and our Scope 3 emissions under waste are expected to reduce by 20%.

### 3.1d

Please provide details on your progress against this target made in the reporting year

ID	% complete (time)	% complete (emissions)	Comment
20	21		Steady improvement from fuel optimization initiatives has driven Qantas Group's fuel efficiency performance towards the IATA-aligned 16.5% fuel efficiency improvement by 2020.

### 3.2

Does the use of your goods and/or services directly enable GHG emissions to be avoided by a third party?

No

### 3.3

Did you have emissions reduction initiatives that were active within the reporting year (this can include those in the planning and/or implementation phases)

Yes

#### 3.3a

Please identify the total number of projects at each stage of development, and for those in the implementation stages, estimated CO2e savings

Stage of development	Number of projects	Total estimated annual CO2e savings (only for rows marked *)
Under investigation		
To be implemented*		
Implementation commenced*	9	326529.78
Implemented*	166	144877.20
Not to be implemented		

#### 3.3b

For those initiatives implemented in the reporting year, please provide details in the table below

Activity type	Description of activity	Estimated annual CO2e savings	Annual monetary savings (unit currency)	Investment required (unit currency)	Payback period
Other	APU Reduction: Reduction in usage of Auxiliary Power Units (APUs) through aircraft connecting aircraft to Ground Power Units (GPUs) that use more efficient and less expensive alternative energy sources to aircraft fuel Other information: - Scope 1 initiative – Voluntary/mandatory: Voluntary – Development stage: In progress – Implemented Expected lifetime: On-going Monetary savings calculated using average market fuel price (\$AUD120/bbl)	7200	2300000		<1 year
Other	Aircraft Weight Reduction: Optimising food, drink & catering equipment; carrying lighter equipment onboard; replacing freight containers with lightweight options & improving weight estimates. Other information: - Scope 1 initiative - Voluntary/mandatory: Voluntary – Development stage: In progress – Implemented Expected lifetime: On-going Monetary savings calculated using average market fuel price (\$AUD120/bbl)	11800	3500000		1-3 years
Other	Flight Planning Optimisation: Improving flight planning accuracy to reduce inefficient flight paths, including system and technology optimisation, flight plan delivery and zero fuel weight optimisation, fuel carriage optimisation. Other information: - Scope 1 initiative –	16200	4700000	120000	<1 year



	Voluntary/mandatory: Voluntary – Development stage: In progress – Expected lifetime: On-going Monetary savings calculated using average market fuel price (\$AUD120/bbl)				
Other	Continued implementation of advanced navigational onboard technology enabling procedures such as Required Navigation Performance (RNP), Automatic Dependent Surveillance -- Broadcast (ADS-B), Dynamic Aircraft Route Planning (DARP), tailored arrivals, Constant Descent Arrivals (CDAs) and Electronic Flight Bag (EFB). Cruise flight level optimisation. Other information: - Scope 1 initiative – Voluntary/mandatory: Voluntary – Development stage: In progress – Implemented Expected lifetime: On-going Monetary savings calculated using average market fuel price (\$AUD120/bbl)	6300	1900000		<1 year

### 3.3c

#### What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Compliance with regulatory requirements/standards	In Australia, Qantas is obligated to report under the National Greenhouse Energy Reporting Act and the Energy Efficiencies Opportunities Act. This is considered as an opportunity to provide transparency to our stakeholders and help identify areas in the business where energy efficiencies can be identified to not only protect the environment but also benefit from long term financial savings. In the EU, Qantas submitted the Annual Emissions and Tonne-kilometre Report to the UK which underpins the European Union Emissions Trading Scheme when it commences in January 2012.
Employee engagement	At Qantas we believe that an important way to reduce emissions is by engaging and involving employees in driving emissions reductions through information sessions, emissions reduction programs and creating incentives to reduce emissions.
Internal finance mechanisms	Qantas has embedded the cost carbon into its internal reporting systems and business cases. Qantas has calculated its current and forward emissions profile and has plans in place to mitigate and/or manage impacts.
Partnering with governments on technology development	Qantas works actively with governments to implement effective economic instruments that incentivise research and development in new technologies that will help reduce the environmental impact of aviation. Over the next year, we look forward to working with governments (as well as other important stakeholders) to build the case for sustainable jet fuel production in Australia. We believe this is important not just for Qantas but for the Australian economy as a whole, given the global emergence of green technologies and their potential to drive growth and create jobs.

#### Further Information

## Page: 4. Communication

### 4.1

Have you published information about your company's response to climate change and GHG emissions performance for this reporting year in other places than in your CDP response? If so, please attach the publication(s)

Publication	Page/Section Reference	Identify the attachment
In annual reports (complete)	114-115	2011AnnualReport
In annual reports (complete)	67-72	qantasDataBook2011

## Further Information

## Attachments

<https://www.cdproject.net/Sites/2012/41/15341/Investor%20CDP%202012/Shared%20Documents/Attachments/InvestorCDP2012/4.Communication/2011AnnualReport.pdf>  
<https://www.cdproject.net/Sites/2012/41/15341/Investor%20CDP%202012/Shared%20Documents/Attachments/InvestorCDP2012/4.Communication/qantasDataBook2011.pdf>

## Module: Risks and Opportunities [Investor]

### Page: 2012-Investor-Risks&Opps-ClimateChangeRisks

#### 5.1

**Have you identified any climate change risks (current or future) that have potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply**

Risks driven by changes in regulation

Risks driven by changes in physical climate parameters

Risks driven by changes in other climate-related developments

#### 5.1a

**Please describe your risks driven by changes in regulation**

ID	Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
	Cap and trade schemes	Carbon price: By mid-2012, Qantas will be facing a carbon price in three jurisdictions: New Zealand, the European Union and Australia.	Reduced demand for goods/services	1-5 years	Direct	Very unlikely	Low
	Cap and trade schemes	Carbon price: By mid-2012, Qantas will be facing a carbon price in three jurisdictions: New Zealand, the European Union and Australia.	Increased operational cost	1-5 years	Direct	Virtually certain	Medium
	Cap and trade schemes	Carbon price: By mid-2012, Qantas will be facing a carbon price in three jurisdictions: New Zealand, the European Union and Australia.	Other: Increased Operational Complexity	Current	Direct	Likely	Low
	Emission reporting obligations	In Australia, Qantas is required to report under the annual National Greenhouse and Energy Report (NGER) and the Energy Efficiencies Opportunities which covers domestic emissions. In the EU, Qantas submitted the Annual Emissions and Tonne-kilometre Report to the UK which will underpin the European Union Emissions Trading Scheme when it commences in January 2012.	Increased operational cost	Current	Direct	Virtually certain	Low

	Fuel/energy taxes and regulations	Environmental taxes: Requirements for Governments to recover revenue lost in the global financial crisis by applying punitive environmental taxes on airlines. Examples of this have been seen in the United Kingdom with the Air Passenger Duty and Germany with the "ecological" departure tax airlines.	Reduced demand for goods/services	Current	Direct	About as likely as not	Low
--	-----------------------------------	--	-----------------------------------	---------	--------	------------------------	-----

## 5.1b

**Please describe (i) the potential financial implications of the risk before taking action; (ii) the methods you are using to manage this risk; and (iii) the costs associated with these actions**

i) The potential financial implications The introduction of a carbon pricing will have cost implications for the Group. The Australian carbon price will result in a \$110m AUD liability for Group's Australian domestic operations and \$2.3m in Europe under the EU ETS. 1) Emissions trading schemes Regional emissions trading schemes (ETS) directly impacting aviation have been enacted in New Zealand and the European Union. Under the EU trading schemes, all flights arriving or departing from EU member state aerodromes will be required to account for carbon emissions produced within each flight sector (i.e. 1 sector = Singapore to London), from January 1, 2012 (irrespective of the nationality of the operator). This currently includes Qantas flights to and from London and Frankfurt. Any additional services to the EU introduced by either Qantas or Jetstar would also be included. Under the EU ETS, the aviation industry will be allocated up to 85% free allowances based on the annual emissions and revenue-ton kilometres reports submitted in 2010. The financial impact will be based on the Group's ability to 'pass through' carbon costs and will be dependent upon market and competitive conditions.

The New Zealand ETS covers Qantas Group domestic operations, operated by Jetstar. The scheme outlines that large users of jet fuel (> ten million litres) can take on the legal obligations themselves (by 'opting-in'), or can adopt the 'default' position where the fuel supplier is responsible for reporting, procuring, surrendering and administering permits on behalf of the 'user'. The costs will be 'passed-on' to the airline under the 'default' approach.

The NZETS does not have a central government auction and participants managing 'point-of-obligation' (i.e. fuel suppliers) will need to source permits directly from New Zealand industry participants or international credits from the open market (Kyoto credits such as Certified Emission Reduction (CER's) for example).

2) Carbon Tax –

In Australia, a carbon pricing scheme will apply to the Group's domestic operations from July 2012. The first 3 years of the scheme has a fixed price of carbon of \$23 a tonne (rising with inflation).

All of these schemes (trading schemes or taxes) will introduce significant compliance costs and in some regions, will introduce competitive distortions between airlines and transport modes.

More prescriptive and often duplicated emissions reporting obligations in Europe and Australia (National Greenhouse Energy Reporting System (NGERS) and Energy Efficiency Opportunities (EEO) are examples of the increasingly complex compliance landscape. Many reporting requirements do not take the unique attributes of aviation into consideration, therefore adding increasing administrative burden.

Aviation is also exposed to the application of punitive government revenue raising under the guise of environmental taxes or to fund developing nation projects for example the UK Government's Aviation Passenger Duty (APD) and 'adaptation levies'. APD will roughly cost between 75-85 pounds sterling for economy passengers and 150-170 pounds sterling for premium passengers.

ii) Methods used to manage the risks

Systems and Processes

The Qantas Group established a Group-wide 'Carbon Readiness Taskforce' in 2007. The carbon readiness program was designed to provide a consistent Group-wide response providing effective carbon price risk management. Carbon and associated regulatory, accounting and systems requirements were subsequently integrated and embedded into the Group's operations where applicable.

Qantas has a comprehensive climate change strategy that has been developed to reduce the Group's emissions and subsequent carbon liabilities. Fleet Renewal, Fuel Optimisation and Sustainable Aviation biofuels are key elements of the strategy.

Qantas has an active fuel conservation program that has saved over one million tonnes of carbon emissions. We are renewing our fleet with technologically advanced fuel-efficient aircraft such as the Airbus A380, Boeing 737-800 and Boeing 787. We have flown commercial flights powered by sustainable biofuel to raise awareness

of the need for a viable sustainable fuels industry as well as partnering with government and refiners on an Australian Sustainable Aviation Fuel supply feasibility study.

Qantas actively engages with policy makers in order to contribute and be part of discussions around the future of carbon pricing, policy and technology to help mitigate the effects of climate change.

In the context of the significant challenges facing the global aviation industry Qantas will be unable to absorb the additional costs of carbon pricing. We have already announced that we will directly pass this cost through to our customers.

iii) The costs involved with these actions:

Cost pass-through : Given the significant challenges facing the global aviation industry Qantas is passing through the cost of compliance with carbon schemes to the customer, with additional surcharges from \$1.80 to \$6.90 based on sector length being applied to tickets purchased.

Compliance: Compliance with the various policy decisions adds an increased administrative burden on the company. However, no additional resources have been required to manage of cost pass-through or compliance with these schemes, as the processes have been converted to business as usual activities and embedded within the organisation.

Fleet Renewal: The most significant cost the Group has is the US\$23 billion investment in highly fuel-efficient next-generation aircraft, such as Airbus A380 and Boeing 787.

#### 5.1c

**Please describe your risks that are driven by change in physical climate parameters**

ID	Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
	Induced changes in natural resources	Australia's natural assets such as the Great Barrier Reef are potentially at risk due to the implications of changing climatic conditions. These assets are fundamental to Australia's appeal as a tourist destination.	Reduced demand for goods/services	1-5 years	Direct	Unlikely	Low
	Change in precipitation extremes and droughts	The floods in Queensland caused severe disruption to services in 2011.	Inability to do business	Current	Direct	Likely	Medium
	Tropical cyclones (hurricanes and typhoons)	Cyclonic activity continued to disrupt operations in 2011.	Inability to do business	Current	Direct	Likely	Medium
	Other physical climate drivers	Changes in weather patterns such as jet stream activity and prevailing wind patterns impact aircraft performance and route planning.	Increased operational cost	1-5 years	Direct	Likely	Low

#### 5.1d

**Please describe (i) the potential financial implications of the risk before taking action; (ii) the methods you are using to manage this risk; and (iii) the costs associated with these actions**

i. Potential financial implications

Impact on Australia's natural assets: The deterioration of Australia's tourism as a result of induced changes in natural resources may impact the Group's commercial success as well as the broader tourism industry. In 2010, the Qantas Group carried 1.8 million inbound visitors to Australian and the national export revenue generated by Qantas inbound tourism is approximated at AUD \$5.8 billion. Any decrease in the appeal of Australia as a tourist destination could impact this number of tourists travelling to Australia and therefore Qantas Group passengers.

Inability to do business due to Extreme weather events: Extreme weather events such as tropical cyclones and floods cause severe disruptions to Qantas' business and resulted in serious financial implications for the business. Qantas estimated that the impact of the Queensland floods amounted to \$55 million. Weather changes: Changes in weather patterns such as temperature, wind speed, direction and humidity are all determinants of aircraft performance. Changes in these conditions can impact the efficiency of aircraft on particular flight paths requiring changes in flight planning, including increased fuel burn. On particular routes where the range of the aircraft operating is impacted, the ability to carry full loads of passengers or freight may be adversely reduced.

The implications of weather related disruptions can include the following financial impacts:

- loss of revenue,
- additional crewing costs,
- additional fuel costs
- displaced passengers and associated costs
- resultant cancelled services
- reduced aircraft utilisation and
- aircraft damage

#### ii. Methods used to manage risks

While the Group has no direct control over the physical risks associated with climate change, it focuses on monitoring these risks, diversifying its operations, building capability in forecasting and managing disruptions, enhancing its crisis response capabilities, contributing to the protection of Australia's natural assets and internationally promoting Australia as a tourist destination.

Impact on Australia's natural assets: The Group contributes to efforts to mitigate the impact of climate change through a broad-based fuel and environmental improvement program. As previously stated the group has dedicated Environment and Fuel Optimisation teams driving an environment improvement program aimed at reducing the Group's impact on the environment.

Through the Qantas Foundation the Group invests in projects and organisations that help contribute to improved land management and the protection of Australian locations from the impact of climate change. The Group has also partnered with Tourism Australia to continue to effectively market Australia as an attractive tourist destination. The partnership covers activity over three years including international cooperative marketing campaigns, major trade events, business events and public relations activities across Europe, Asia, US and New Zealand.

The Group has also established the annual Qantas Award for Excellence in Sustainable Tourism in 2010, and continued to do so in 2011.

The award is a demonstration of our commitment to sustainable growth and support of tourism businesses that protect, enhance and promote our distinctive destinations and environment.

The annual 'Qantas Award for Excellence in Sustainable Tourism' is designed to:

- Recognise and reward tourism businesses that implement the principles of sustainable tourism; those who set out to minimise their impact on the local environment, conserve natural resources, respect local culture and benefit local communities.
- Inspire other tourism businesses to adopt new sustainable ways of doing business.
- Acknowledge tourism businesses that provide a unique travel experience and inspire visitors to promote Australia as one of world's leading sustainable tourism destinations.

In 2011, the winner of the Sustainable Tourism award was Lane Cove River national park, which received a prize of \$25,000 designed to be invested in a project aligned with the philosophy of the award, as well as coverage in all Qantas' extensive communication channels. Prizes were also given out to winners in each state of \$2,000.

Inability to do business due to Extreme weather events and Weather changes:

The Group has invested in additional capability and information to ensure minimum impacts to the Group's operations resulting from natural events such as tropical cyclones, tsunamis and volcanic eruptions.

The following are examples of the actions taken to manage these risks:

- Development and ongoing review of the Group's Fuel Policy, designed to enable safe and efficient operations. The policy states requirements dependent on the probability of weather related events.
- In-house meteorological capability. Through Qantas Meteorological (QMET), skilled analysis of weather related information is linked to the Group's policies and procedures
- Development of probability based risk assessments to assist in route and contingency planning based on the difference between forecast, expected and unforeseen

events.

- Forecast and real time flight planning functionality to optimise use of wind conditions that optimises the use of User Preferred routes.
- Participation in the development of new standards to manage issues such as volcanic eruptions. The Group's participation in developing these standards assists in safely minimising the disruption to the Group's operations.
- Exploring options for partnerships with the Cooperative Research centre to further enhance predictive forecasting.
- Ongoing research and development with Australian Climate and Weather Centre for Research (CAWR).

iii. Associated costs of actions

Impact on Australia's natural assets:

Qantas has donated AUD\$2 million dollars to the Qantas Foundation Environmental Sustainable Fund to support environmental conservation programs with a focus on protecting Australia's natural assets.

The three year partnership with Tourism Australia is worth AUD\$44 million.

Qantas has invested over \$1m in the Sustainable Tourism program since it commenced. The Qantas Award for Excellence in Sustainable Tourism provides each State based winner a prize of \$2,000. The national winner of the award then receives a major prize of \$25,000.

In addition, the national winner will receive coverage through Qantas' extensive communication channels, including 'Qantas - The Australian Way' inflight magazine and other inflight entertainment channels. This will provide significant exposure for these businesses to thousands of national and international consumers.

#### 5.1e

**Please describe your risks that are driven by changes in other climate-related developments**

ID	Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
	Reputation	Aviation is currently a carbon intensive industry. A perceived lack of action by the Qantas Group or industry in general could result in brand damage.	Reduced demand for goods/services	Unknown	Direct	Very unlikely	Low
	Changing consumer behaviour	There is a potential risk that customer may demand products that reduce their carbon footprint. Technology such as video conferencing may provide alternatives for face- to-face meetings therefore reducing demand for air travel.	Reduced demand for goods/services	Unknown	Direct	Very unlikely	Low

#### 5.1f

**Please describe (i) the potential financial implications of the risk before taking action; (ii) the methods you are using to manage this risk; (iii) the costs associated with these actions**

i. Potential financial implications

In some parts of the world aviation has been identified as an industry with a growing emissions footprint. Negative perception about the industry may lead to increased calls for financial penalties, operating restrictions and brand damage to airlines.

Any perceived inaction by airlines may lead to further negative assessment by customers, which may impact market share and revenue.

ii. Methods used to manage this risk

Qantas has a comprehensive climate change strategy in place and has been committed to transparent reporting since 2007. Qantas has identified a need to ensure that it continues to improve communications with stakeholders to ensure that its efforts are well understood. The Group's communication objective is to ensure the perception of its operations are reflective of its environmental commitment and activity. The use of company websites, publications, executive presentations and media releases are used for this purpose.

Regular customer feedback is requested through direct surveys and websites for regular monitoring of communication effectiveness and to understand customer

perception of performance. Commercially, there is a growing trend for many corporate and government customers to request that their major suppliers demonstrate sustainability performance as part of commercial negotiations. In response to these changed expectations, the Group made a commitment to transparent reporting of sustainability performance. This includes dedicated information in the Annual and Sustainability reports as well as the leading sustainability indexes, FTSE4Good and Dow Jones Sustainability Index (DJSI) as well as the global Carbon Disclosure Project.

The Group’s commitment to transparency also enables it to obtain external recognition/feedback on the environmental and climate change strategies. The Group regularly engages with NGO’s and community groups to openly discuss environmental issues.

Complementing the extensive activity to reduce the Group’s environmental footprint, in 2007 the Qantas Group airlines launched the “Fly Carbon Neutral” program. The program provides customers the opportunity to offset their share of flight emissions through Australian Government accredited programs. This program is made available to customers booking their flights through qantas.com and jetstar.com.

The Group also offsets its employees travel for business purpose and emissions from ground vehicle use. In addition to this online program, tailored carbon emission reporting was developed for Qantas Corporate Customers. Reports are available for Corporate Customers outlining the emissions attributable to their company’s business travel. The option of offsetting these emissions is also available through this program.

iii. Costs associated with these actions

The above-mentioned reporting and communication commitments have been embedded within the Group’s existing processes resulting in no additional expense. The cost of the Group’s commitment to offset the emissions from employee business travel and ground transport emissions was approximately \$550,000 for the reporting year.

Further Information

6.1 Have you identified any climate change opportunities (current or future) that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

- Opportunities driven by changes in regulation
- Opportunities driven by changes in other climate-related developments

6.1a Please describe your opportunities that are driven by changes in regulation

ID	Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact
	Cap and trade schemes	Zero rating of biofuels: Current guidance provided within Emission trading schemes in Australia and the European Union indicate that the use of biofuel will not incur carbon costs.	Reduced operational costs	6-10 years	Direct	Virtually certain	Low-medium
	Other regulatory drivers	Improvement in energy efficiency: Focus on reporting and disclosing environmental performance may result in further improvements in environmental performance.	Reduced operational costs	1-5 years	Direct	Virtually certain	Low
	Other regulatory	The design of effective carbon regulatory frameworks will avoid creating competitive distortions and provide incentives for	Other: Avoids creating			Very	

	drivers	organisations to invest in research and development.	competitive distortions	1-5 years	Direct	unlikely	Low
--	---------	--	-------------------------	-----------	--------	----------	-----

## 6.1b

Please describe (i) the potential financial implications of the opportunity; (ii) the methods you are using to manage this opportunity; (iii) the costs associated with these actions

### i. Potential financial implications

The changing regulatory environment has the potential to positively impact the Group's carbon efficiency and therefore its overall environmental footprint. Regulatory opportunities have the potential to reduce operating costs or avoid additional costs on the Qantas Group.

Zero rating of biofuels:

Qantas has a comprehensive climate change strategy which includes working to accelerate the commercialisation of Sustainable Aviation Fuels (SAFs) that have the potential to mitigate much of the incremental carbon costs. This is on the basis that 'biofuels' have no (or minimal) carbon charge under proposed regulations, ie. they are 'zero-rated'. Sustainable aviation fuel may reduce operating costs through reducing carbon costs and providing competition in the fuel market potentially leading to lower costs. Any use of a sustainable biofuel in the Group's Australian domestic or European operations would directly reduce the respective \$110m and \$2.3m liabilities.

As an Australian airline group the opportunities to focus on SAF production is within Australia. Australia has the unique characteristics of abundant land, access to Asia, geopolitical stability, favourable weather conditions and existing distribution infrastructure that make developing and producing biofuel sourced sustainable fuel possible. According to the CSIRO Sustainable Aviation Fuel Roadmap (May 2011), if the aviation sector in Australia and New Zealand can achieve a 5 per cent cent bio-derived jet fuel share in their fuel use by 2020, expanding that amount to 40 per cent of their total fuel use by 2050, the development will enable:

- The stabilisation of aviation industry emissions from 2020 and assists in reducing emissions from 2030;
- Savings of over \$2 billion per annum on jet fuel imports and achieve a 17 per cent reduction in aviation GHG emissions per annum relative to an all petroleum-based jet fuel future;
- The creation of potentially 12,000 new jobs by 2030; and
- The continued growth and ongoing contribution to the economy of the \$39 billion Australasian tourism industry.

Improvement in energy efficiency:

Governments will need to adopt more effective economic instruments that provide incentives to finance research and development in new technology and efficiently designed global climate policies that do not create competitive distortions.

Each of these areas has the potential to significantly improve fuel efficiency and reduce emissions intensity - improving environmental performance and profitability.

The design of effective carbon regulatory frameworks:

Opportunities from participating in the design of legislative/economic instruments that do not create competitive distortions are particularly important for Australian based carriers due to the ultra-long haul sectors required to reach major destinations.

With a focus on carbon pricing there may be an increasing focus on reducing energy costs and promoting innovation. Early action on any energy related activity may avoid the impact of future increasing costs for resources such as fuel and energy.

### ii. Methods used to manage opportunities

Zero rating of biofuels:

Qantas is committed to taking a leading role in the development of sustainable alternatives to traditional fossil fuels in our region.

Cleaner jet fuels promise to significantly reduce the environmental impact of aviation. To be acceptable for use, these new fuels must meet aviation's stringent safety, performance and sustainability standards. Significant progress has been made in the past three years in addressing the technical challenges of developing fuels using bio-derived sources such as oil from trees, algae and plants.

Importantly, these fuels must also be a direct 'drop-in' substitute for traditional jet fuels (Jet A-1) to avoid having to redesign engines, airframes or fuel delivery systems.

The Group has been involved in a number of activities designed to accelerate the commercialisation of sustainable aviation fuel in Australia:

- Qantas joined the Sustainable Aviation Fuel Users Group (SAFUG), a global group of leading airlines and aviation companies working together with scientific agencies and leading environmental non-government organisations (NGOs) to develop cleaner jet fuels.



- Qantas launched a world-first 'Roadmap' study in conjunction ASAFUG and the CSIRO, Australia's peak science agency. The Roadmap is addressing barriers to a commercial and scalable sustainable aviation fuels industry bringing together a diverse group including aviation, scientific, traditional fuel supply, government and community stakeholders with different expertise and perspectives.
- The Qantas Group conducted Australia's first commercial biofuel flights using a Qantas A330 and Jetstar A320.

At the same time as the first commercial biofuel flights the Group announced the commencement of a first-of-its-kind study in the feasibility of an Australian Aviation Biofuel Industry. The \$500,000 study, co-contributed by Qantas, the Australian Government and Shell will investigate viable feedstock options as well as the refining and distribution options.

The design of effective carbon regulatory frameworks:

Qantas is taking an active role domestically and internationally in pressing for climate change regulations that are harmonised and do not introduce competitive distortion. This work is undertaken through participation in available consultation forums and sessions.

Improvement in energy efficiency:

To further drive emission reduction activities within the Qantas Group we are capitalising on environmental reporting obligations the following activities have been established:

- Fuel and environmental working groups dedicated to identify and implement emission reduction activities,
- Training programs to promote energy efficiency for employees enabled through government funding for employee education.
- Employee reward and recognition programs to provide incentives for measureable improvements around fuel, energy, water and waste reduction and
- Expanded monitoring of fuel and energy related costs throughout the business.

iii. Costs associated with these actions

To date the majority of costs involved in these activities has been related to manpower resources required to participate in industry working groups and development of feasibility studies.

Zero rating of biofuels:

Support from Qantas, Shell and a \$500,000 grant from the Australian Governments Emerging Renewable Program will be used to complete a study into the long-term viability of biofuel feedstock and the production of low carbon alternative aviation fuels in Australia.

## 6.1e

**Please describe the opportunities that are driven by changes in other climate-related developments**

ID	Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
	Other drivers	Improvement in Air Traffic Management	Reduced capital costs	1-5 years	Direct	Likely	Low-medium

## 6.1f

**Please describe (i) the potential financial implications of the opportunity; (ii) the methods you are using to manage this opportunity; (iii) the costs associated with these actions**

i. Potential financial implications

Improvements in Air Traffic efficiency could provide the following benefits:

- Improvement in fuel efficiency through optimised aircraft performance and reduced flying distances
- Schedule integrity. Reduction in delays and aircraft holding enables better on-time performance and reduction in flow-on impacts.
- System capacity improvement and
- Reduction in noise for airport communities

Improvements in these areas may reduce costs for the organisation and improve customer satisfaction.

It is estimated by IATA that improvements in Air Traffic Management could improve fuel efficiency by greater than 10%.

With a fuel as one of the largest line item costs for the Qantas Group any improvement in efficiency will have direct financial benefits.

ii. Methods used to manage opportunity

The Qantas Group's actions to maximise this opportunity are focused on investment and deployment of leading edge technology, actively driving industry forums for improved air traffic management and engaging with government to influence and incentivise take-up of these technologies. Operational measures continue to be implemented and today are reliant on Air Service Navigation Providers (e.g. Airservices Australia (AsA), Federal Aviation Administration (FAA)). General airspace efficiency and more favourable airport infrastructure and capability are also high on the Group's agenda. The Group's investment in aircraft technology allows the deployment of new navigation techniques and procedures. These initiatives have the potential to deliver large financial and environmental benefits. Performance Based Navigation (PBN) and new techniques such as Required Navigation Performance (RNP) improve predictability and accuracy of aircraft flight paths. This investment in technology has been complemented by significant increase in training to capitalise on the aircraft's capability. Communities and their appointed representative bodies are expecting greater involvement in the decision-making process regarding local airport and flight related issues and Qantas is an active participant in community forums. Continued roll out of the RNP program across Australia is enabling more efficient, safer and noise sensitive flight paths to be flown and the Qantas Group is currently the only airline group in Australia deploying this technology. In addition, continued procedural improvement associated with Free Flight (Improved flight planning) and Dynamic Airborne Route Planning (DARP) (a process that enables flight plans to be recalculated whilst the aircraft is in-flight), continue to benefit the Groups fuel and environmental performance. Qantas also takes a leadership role at the Air Traffic Management Performance Group (ATMPG) with Government stakeholders to influence and prioritise airspace activities that deliver benefit to industry including community relations aspects.

iii. Costs associated with actions

The costs associated with benefiting from the advancement in new technology aircraft is related to the Qantas Group US\$23 billion (at list prices) investment in next-generation aircraft, such as Airbus A380 and Boeing 787. Additional costs are also associated with:

- crew training
- procedure design for new procedures and retrofitting of aircraft and
- with new technology navigation systems.

#### 6.1h

**Please explain why you do not consider your company to be exposed to opportunities driven by physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure**

Potential physical changes resulting from climate change are unlikely to present any potential to generate substantive change for the Qantas Group. The Qantas Group's primary business is the air transportation of passengers and freight. Any potential opportunities would need to provide advantages through the opening of new markets, increasing demand for air travel over other modes of transport or reducing costs of the business. The Qantas Group's route network serves 173 destinations in 42 countries (including those covered by code share partners) in Australia, Asia and the Pacific, the Americas, Europe and Africa. Changes in potential tourist destinations resulting from changing climate conditions may open up new routes. However these same changes may also make existing tourist destinations less popular impacting existing route profitability. Other physical changes that may have positive impacts on the supply chain are unlikely to be relevant to kerosene fuel supply or aircraft manufacturing, the group's biggest procurement spend. Qantas constantly reviews the demand for services to existing and new destinations as part of its commercial planning. Any physical effects of climate change, impacting demand for air transportation will be identified as part of this process. Any opportunities driven by physical climate change parameters that have the potential to develop new markets or customers will be investigated in due course.

#### Further Information

### 7.1

Please provide your base year and base year emissions (Scopes 1 and 2)

Base year	Scope 1 Base year emissions (metric tonnes CO2e)	Scope 2 Base year emissions (metric tonnes CO2e)
Fri 01 Jul 2005 - Tue 20 Jun 2006	11892779	239563

### 7.2

Please give the name of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

Please select the published methodologies that you use

Australia - National Greenhouse and Energy Reporting Act

### 7.2a

If you have selected "Other", please provide details below

### 7.3

Please give the source for the global warming potentials you have used

Gas	Reference
CO2	Other: National Greenhouse Accounts (NGA) Factors – June 2009 – Appendix 1
CH4	Other: National Greenhouse Accounts (NGA) Factors – June 2009 – Appendix 1
Other: N2O	Other: National Greenhouse Accounts (NGA) Factors – June 2009 – Appendix 1

### 7.4

Please give the emissions factors you have applied and their origin; alternatively, please attach an Excel spreadsheet with this data

Fuel/Material/Energy	Emission Factor	Unit	Reference
Jet kerosene	2.56	Other: tonnes CO2e per kL	National Greenhouse Accounts (NGA) Factors – June 2009 – Table 4
Other: Ground Fuel- Unleaded Petrol	2.38	Other: tonnes CO2e per kL	National Greenhouse Accounts (NGA) Factors – June 2009 – Table 4
Other: Ground fuel - Diesel	2.70	Other: tonnes CO2e per kL	National Greenhouse Accounts (NGA) Factors – June 2009 – Table 4
Natural gas	51.33	metric tonnes CO2 per GJ	National Greenhouse Accounts (NGA) Factors – June 2009 – Table 2
Other: Purchased Electricity – ACT, NSW, QLD	0.89	Other: tonnes CO2e per kWh	National Greenhouse Accounts (NGA) Factors – June 2009 – Table 5

Other: Purchased Electricity – NT	0.68	Other: tonnes CO2e per kWh	National Greenhouse Accounts (NGA) Factors – June 2009 – Table 5
Other: Purchased Electricity – SA	0.77	Other: tonnes CO2e per kWh	National Greenhouse Accounts (NGA) Factors – June 2009 – Table 5
Other: Purchased Electricity – TAS	0.23	Other: tonnes CO2e per kWh	National Greenhouse Accounts (NGA) Factors – June 2009 – Table 5
Other: Purchased Electricity – VIC	1.22	Other: tonnes CO2e per kWh	National Greenhouse Accounts (NGA) Factors – June 2009 – Table 5
Other: Purchased Electricity – WA	0.84	Other: tonnes CO2e per kWh	National Greenhouse Accounts (NGA) Factors – June 2009 – Table 5

## Further Information

### Page: 8. Emissions Data - (1 Jul 2010 - 30 Jun 2011)

#### 8.1

Please select the boundary you are using for your Scope 1 and 2 greenhouse gas inventory

Operational control

#### 8.2a

Please provide your gross global Scope 1 emissions figure in metric tonnes CO2e

12387552

#### 8.3a

Please provide your gross global Scope 2 emissions figure in metric tonnes CO2e

216941

#### 8.4

Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions which are not included in your disclosure?

Yes

#### 8.4a

Please complete the table

Source	Scope	Explain why the source is excluded
International	Scope	The majority of the properties occupied outside of Australia consist of leased space within multi user facilities. In many cases this

Facilities - Facilities	2	area is shared with other organisations. Information regarding emissions from overseas facilities is considered non-material.
International Facilities - Ground Handling	Scope 1	The majority of the Group's ground handling functionality in overseas ports is outsourced. Information regarding emissions from these sources is difficult to obtain and considered non-material.

## 8.5

Please estimate the level of uncertainty of the total gross global Scope 1 and Scope 2 figures that you have supplied and specify the sources of uncertainty in your data gathering, handling, and calculations

Scope 1 emissions: Uncertainty range	Scope 1 emissions: Main sources of uncertainty	Scope 1 emissions: Please expand on the uncertainty in your data	Scope 2 emissions: Uncertainty range	Scope 2 emissions: Main sources of uncertainty	Scope 2 emissions: Please expand on the uncertainty in your data
Less than or equal to 2%	Other: Accrual Methods	CO2-e emissions from aviation are directly related to aircraft fuel consumption. Accrual data is only used where invoices have not been received from suppliers. In these cases accrual is estimated using known aircraft fuel burn rates.	More than 2% but less than or equal to 5%	Other: Accrual Methods	Estimation of data is required when the timeliness of data is required. It is common for utility invoices to be supplied for a three month period. The accrual period is regularly reviewed for accuracy against actual data once available

## 8.6

Please indicate the verification/assurance status that applies to your Scope 1 emissions

Verification or assurance complete

### 8.6a

Please indicate the proportion of your Scope 1 emissions that are verified/assured

More than 90% but less than or equal to 100%

### 8.6b

Please provide further details of the verification/assurance undertaken, and attach the relevant statements

Level of verification or assurance	Relevant verification standard	Relevant statement attached
Reasonable assurance	ISAE 3000	Annual Report 2011 Page 119 (AnnualReport2011)

## 8.7

Please indicate the verification/assurance status that applies to your Scope 2 emissions

Verification or assurance complete

### 8.7a

Please indicate the proportion of your Scope 2 emissions that are verified/assured

More than 90% but less than or equal to 100%

**8.7b**

Please provide further details of the verification/assurance undertaken, and attach the relevant statements

Level of verification or assurance	Relevant verification standard	Relevant statement attached
Limited assurance	ISAE 3000	Annual Report Page 116 (AnnualReport2011)

**8.8**

Are carbon dioxide emissions from the combustion of biologically sequestered carbon (i.e. carbon dioxide emissions from burning biomass/biofuels) relevant to your company?

No

**Further Information**

**Attachments**

[https://www.cdproject.net/Sites/2012/41/15341/Investor%20CDP%202012/Shared%20Documents/Attachments/InvestorCDP2012/8.EmissionsData\(1Jul2010-30Jun2011\)/2011AnnualReport.pdf](https://www.cdproject.net/Sites/2012/41/15341/Investor%20CDP%202012/Shared%20Documents/Attachments/InvestorCDP2012/8.EmissionsData(1Jul2010-30Jun2011)/2011AnnualReport.pdf)

Page: 9. Scope 1 Emissions Breakdown - (1 Jul 2010 - 30 Jun 2011)

**9.1**

Do you have Scope 1 emissions sources in more than one country or region (if covered by emissions regulation at a regional level)?

Yes

**9.1a**

Please complete the table below

Country	Scope 1 metric tonnes CO2e
Australia	4362807
Other: Outside Australia	8024745

**9.2**

Please indicate which other Scope 1 emissions breakdowns you are able to provide (tick all that apply)

**Further Information**

**Page: 10. Scope 2 Emissions Breakdown - (1 Jul 2010 - 30 Jun 2011)**

**10.1**

**Do you have Scope 2 emissions sources in more than one country or region (if covered by emissions regulation at a regional level)?**

Yes

**10.1a**

**Please complete the table below**

Country	Scope 2 metric tonnes CO2e
Other: ACT	3048.29
Other: NSW	98846.61
Other: QLD	35733.28
Other: SA	2918.31
Other: TAS	330.36
Other: VIC	62580.20
Other: WA	11781.45
Other: NT	385.82

**10.2**

**Please indicate which other Scope 2 emissions breakdowns you are able to provide (tick all that apply)**

**Further Information**

**Page: 11. Emissions Scope 2 Contractual**

**11.1**

**Do you consider that the grid average factors used to report Scope 2 emissions in Question 8.3 reflect the contractual arrangements you have with electricity suppliers?**

Yes

**11.2**

**Has your organization retired any certificates, e.g. Renewable Energy Certificates, associated with zero or low carbon electricity within the reporting year or has this been done**

on your behalf?

No

Further Information

Page: 12. Energy

12.1  
What percentage of your total operational spend in the reporting year was on energy?

More than 25% but less than or equal to 30%

12.2  
Please state how much fuel, electricity, heat, steam, and cooling in MWh your organization has consumed during the reporting year

Energy type	MWh
Fuel	17259237.19
Electricity	225752.92
Heat	86007.08
Steam	0
Cooling	0

12.3  
Please complete the table by breaking down the total "Fuel" figure entered above by fuel type

Fuels	MWh
Other: Ground Fuel	90647.18
Jet kerosene	17259237.19

Further Information

Page: 13. Emissions Performance

13.1  
How do your absolute emissions (Scope 1 and 2 combined) for the reporting year compare to the previous year?



Increased

**13.1a**

Please complete the table

Reason	Emissions value (percentage)	Direction of change	Comment
Change in output	4	Increase	Available Seat Kilometres grew significantly in 2011 as Qantas Group's activities expanded.
	0.25	Increase	Revenue Seat Factor dropped slightly in 2011, reducing fuel efficiency, due to a competitive business environment with several natural and human interruptions to business activity.

**13.2**

Please describe your gross combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO2e per unit currency total revenue

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for Change
0.00116	metric tonnes CO2e	unit total revenue	1.99	Decrease	Lower year-on-year revenue for FY2011.

**13.3**

Please describe your gross combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO2e per full time equivalent (FTE) employee

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for Change
381.94	metric tonnes CO2e	FTE Employee	4	Increase	Increase in Full Time Employees, in line with operational increases that drove absolute emissions.

**13.4**

Please provide an additional intensity (normalized) metric that is appropriate to your business operations

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for Change
0.0000937	metric tonnes CO2e	Other: Available Seat Kilometers	2.07	Decrease	Qantas implemented and continued to implement a number of fuel saving initiatives this year, leading to improved flying performance and lower C02/ASK emissions, in spite of strong ASK growth.

Further Information

14.1  
Do you participate in any emission trading schemes?

No, but we anticipate doing so in the next two years

14.1b  
What is your strategy for complying with the schemes in which you participate or anticipate participating?

Our strategy is based on continual improvement of the efficiency of the Group's operations by improving fuel efficiency through fleet and operational optimization, as well as integration of carbon compliance at the most relevant levels of the business to improve the speed and veracity of Qantas' carbon compliance.

14.2  
Has your company originated any project-based carbon credits or purchased any within the reporting period?

Yes

14.2a  
Please complete the following table

Credit origination or credit purchase	Project type	Project identification	Verified to which standard	Number of credits (metric tonnes of CO2e)	Number of credits (metric tonnes CO2e): Risk adjusted volume	Credits retired	Purpose e.g. compliance
Credit Purchase	Other: Energy Demand	VCS122	VCS	10500	10500	Yes	Voluntary Offsetting
Credit Purchase	Other: Energy industries (renewable/nonrenewable sources	VCS308	VCS	8439	8439	Yes	Voluntary Offsetting
Credit Purchase	Other: Energy industries (renewable/nonrenewable sources	VCS308	VCS	12507	12507	Yes	Voluntary Offsetting
Credit Purchase	Other: Energy Demand	VCS122	VCS	15000	15000	Yes	Voluntary Offsetting
Credit Purchase	Other: Energy industries (renewable/nonrenewable sources	VCS308	VCS	23579	23579	Yes	Voluntary Offsetting
Credit Purchase	Other: Energy industries (renewable/nonrenewable sources	VCS308	VCS	22129	22129	Yes	Voluntary Offsetting

Credit Purchase	Other: Energy Demand	VCS122	VCS	3098	3098	Yes	Voluntary Offsetting
Credit Purchase	Other: Energy Demand	VCS122	VCS	476	476	Yes	Voluntary Offsetting
Credit Purchase	Other: Energy Demand	VCS122	VCS	253	253	Yes	Voluntary Offsetting
Credit Purchase	Other: Energy Demand	VCS122	VCS	3876	3876	Yes	Voluntary Offsetting
Credit Purchase	Other: Energy Demand	VCS122	VCS	1895	1895	Yes	Voluntary Offsetting
	Other: Energy Demand	VCS122	VCS	1000	1000	Yes	Voluntary Offsetting
Credit Purchase	Other: Energy industries (renewable/nonrenewable sources)	VCS308	VCS	42368	42368	Yes	Voluntary Offsetting

## Further Information

## Page: 2012-Investor-Scope 3 Emissions

### 15.1

Please provide data on sources of Scope 3 emissions that are relevant to your organization

Sources of Scope 3 emissions	metric tonnes CO2e	Methodology	If you cannot provide a figure for emissions, please describe them
Waste generated in operations	30178.8	Waste disposal figures are provided by the Group's waste contractors. Emissions factors from the National Greenhouse Accounts (NGA).	

### 15.2

Please indicate the verification/assurance status that applies to your Scope 3 emissions

Verification or assurance complete

### 15.2a

Please indicate the proportion of your Scope 3 emissions that are verified/assured

More than 90% but less than or equal to 100%

**15.2b**

Please provide further details of the verification/assurance undertaken, and attach the relevant statements

Level of verification or assurance	Relevant verification standard	Relevant statement attached
Limited assurance	ISAE 3000	Annual Report, pg 117 (AnnualReport2011)

**15.3**

Are you able to compare your Scope 3 emissions for the reporting year with those for the previous year for any sources?

Yes

**15.3a**

Please complete the table

Sources of Scope 3 emissions	Reason for change	Emissions value (percentage)	Direction of change	Comment
Waste generated in operations	Emissions reduction activities	10.52	Decrease	Aggressive waste reduction strategies across the Group led to a significant reduction in waste to landfill, including diversion of all Sydney domestic waste to an Alternative Waste Treatment plant.

**Further Information****Attachments**

<https://www.cdproject.net/Sites/2012/41/15341/Investor%20CDP%202012/Shared%20Documents/Attachments/InvestorCDP2012/15.Scope3Emissions/2011AnnualReport.pdf>

**Module: Sign Off**

**Page: Sign Off**

Please enter the name of the individual that has signed off (approved) the response and their job title

John Valastro, Head of Qantas Group Environment, Business Resilience and Workplace Transformation