PUBLIC REPORT 2012

Part 1 - Corporation Details

Controlling Corporation

The name of the Controlling Corporation exactly as it is registered with the EEO Program:

QANTAS AIRWAYS LIMITED

Overview

Qantas Airways Limited ("The Qantas Group") is Australia's largest domestic and international airline, with a reputation for excellence in safety, operational reliability, engineering and maintenance and customer service. The group includes three flying businesses – Qantas, Jetstar and QantasLink.

The Qantas Group is committed to economic, social and environmental sustainability by maintaining its world class environmental performance record. Much of the focus for energy efficiency gains for the Qantas Group has been directed to fuel optimisation strategies given that aircraft operations contribute the majority of total Qantas Group greenhouse gas emissions.

The Qantas Group's long-term strategy with regard to energy consumption is based on:

- robust measurement and transparent reporting of our environmental footprint;
- investment in advanced technologies and fuel efficient aircraft;
- leading fuel optimisation and airspace management activities that represent best practice and leadership; and
- active involvement in industry efforts to develop fuel from renewable sources, including sustainable aviation fuel.

The Qantas Group has been an active participant in the EEO Program over the last five years. During that time, the group has delivered savings in energy use of approximately 7 PJ per annum.

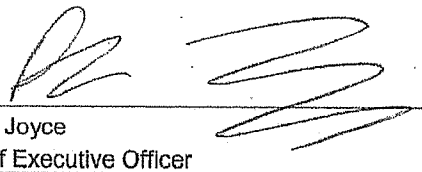
Moving into our second cycle, the Qantas Group will continue to focus extensively on fuel optimisation. Fuel consumption is one of the largest contributors to our operating budget and the Qantas Group recognises that by focusing on energy efficiency and fuel optimisation there is great potential to positively impact our operating expenses whilst fulfilling our commitment to the environment.

This report summarises the assessments conducted and opportunities identified during our first EEO assessment cycle which covers the period 1st July 2006 to 30th June 2011. Business responses and savings figures are updated to represent status as at 30th June 2012. The tables within Part 3 list the opportunities that will be carried over into our second EEO assessment cycle as well as new opportunities identified during the last 12 months.

Table 1.1 - Major Changes to Corporate Group Structure or Operations

Table 1.1 – Major Changes to Corporate Group Structure or Operations in the last 12 months
There were no major changes to the Corporate Group Structure or Operations that would materially impact the Group's EEO program.

Declaration

Declaration of accuracy and compliance	
The information included in this report has been reviewed and noted by the board of directors and is to the best of my knowledge, correct and in accordance with the *Energy Efficiency Opportunities Act 2006* and *Energy Efficiency Opportunities Regulations 2006*.	 Alan Joyce Chief Executive Officer **Date:** 20/12/12

Part 2 - Assessment Outcomes

Table 2.1 – Assessment Details

Controlling Corporation	QANTAS AIRWAYS LIMITED

Total energy use in the last financial year	64,924,050	GJ
Total percentage of energy use assessed	96.8	%

Description of the way in which the entity carried out its assessment

As aviation fuel constitutes approximately 97% of our domestic energy consumption, it naturally forms the focus of the group's energy efficiency measures. Qantas fuel optimisation assessments have been carried out on an ongoing basis since 2005.

Assessments involved conducting investigations within six key business segments:

Business Segments	**Focus Areas**
Flight Operations	'On ground' power alternatives Flight planning and scheduling
Engineering	Optimising aircraft systems and performance (engines, airframes, etc)
Air Traffic Management Performance	Route optimisation and air traffic management
Airport and payload optimisation	Optimising payload and fuelling requirements Ground infrastructure
Onboard product weight management	On-board weight minimisation through lightweight alternatives
Fleet renewal	Aircraft replacement strategy and program

Aviation fuel consumption is continuously measured by aircraft in cockpit metering devices. This information is collected and analysed. Initiatives are identified and investigated via site/aircraft inspections, discussions with staff from the relevant segments, and engineering analysis of energy use against relevant technical data and business metrics.

Opportunities are evaluated for implementation across the fleet, taking into consideration the environmental and cost benefits, payback and contribution towards Qantas' fuel optimisation targets. Each opportunity approved for implementation is allocated an owner within the relevant business segment, and analytical support is provided to ensure that it is quantified during the analysis and savings tracking after implementation.

Table 2a.1 – Assessment Details

Name of key activity	Qantas (Domestic) Air Operations

Total energy use in the last financial year	37,957,996	GJ
Total percentage of energy use assessed	58.5	%

Table 2a.2 - Energy efficiency opportunities identified in the assessment

The table below summarises the number of opportunities identified, and the estimated annual energy savings. These are grouped according to each opportunities 'Business Response' in line with EEO requirements.

Status of opportunities identified to an accuracy of better than or equal to ±30%		Total Number of opportunities	Estimated energy savings per annum by payback period (GJ)						Total estimated energy savings per annum (GJ)
			0 – 2 years		2 – 4 years		> 4 years		
			No of Opps	GJ	No of Opps	GJ	No of Opps	GJ	
Business Response	Implemented	174	172	1,622,497	0	0	2	4,707,315	6,329,812
	Implementation Commenced	5	5	61,103	0	0	0	0	61,103
	To be Implemented	3	3	0	0	0	0	0	0
	Under Investigation	0	0	0	0	0	0	0	0
	Not to be Implemented	0	0	0	0	0	0	0	0
Outcomes of assessment	Total Identified	182	180	1,683,600	0	0	2	4,707,315	6,390,915

Please note that Corporate Groups **are not required** to report opportunities with a payback greater than 4 years. Reporting this data is voluntary.

Table 2b.1 – Assessment Details

Name of key activity	Jetstar Air Operations

Total energy use in the last financial year	16,719,274	GJ
Total percentage of energy use assessed	25.8	%

Table 2b.2 - Energy efficiency opportunities identified in the assessment

The table below summarises the number of opportunities identified, and the estimated annual energy savings. These are grouped according to each opportunities 'Business Response' in line with EEO requirements.

Status of opportunities identified to an accuracy of better than or equal to ±30%		Total Number of opportunities	Estimated energy savings per annum by payback period (GJ)						Total estimated energy savings per annum (GJ)
			0 – 2 years		2 – 4 years		> 4 years		
			No of Opps	GJ	No of Opps	GJ	No of Opps	GJ	
Business Response	Implemented	21	21	310,364	0	0	0	0	310,364
	Implementation Commenced	3	3	197,389	0	0	0	0	197,389
	To be Implemented	1	1	9,181	0	0	0	0	9,181
	Under Investigation	2	2	27,543	0	0	0	0	27,543
	Not to be Implemented	0	0	0	0	0	0	0	0
Outcomes of assessment	Total Identified	27	27	544,476	0	0	0	0	544,476

Please note that Corporate Groups **are not required** to report opportunities with a payback greater than 4 years. Reporting this data is voluntary.

Table 2c.1 – Assessment Details

Name of key activity	QantasLink Air Operations

Total energy use in the last financial year	8,176,091	GJ
Total percentage of energy use assessed	12.6	%

Table 2c.2 - Energy efficiency opportunities identified in the assessment

The table below summarises the number of opportunities identified, and the estimated annual energy savings. These are grouped according to each opportunities 'Business Response' in line with EEO requirements.

Status of opportunities identified to an accuracy of better than or equal to ±30%		**Total Number of opportunities**	**Estimated energy savings per annum by payback period (GJ)**						**Total estimated energy savings per annum (GJ)**
			0 – 2 years		**2 – 4 years**		**> 4 years**		
			No of Opps	**GJ**	**No of Opps**	**GJ**	**No of Opps**	**GJ**	
Business Response	Implemented	2	2	16,057	0	0	0	0	16,057
	Implementation Commenced	1	1	36,234	0	0	0	0	36,234
	To be Implemented	1	1	40,763	0	0	0	0	40,763
	Under Investigation	0	0	0	0	0	0	0	0
	Not to be Implemented	0	0	0	0	0	0	0	0
Outcomes of assessment	Total Identified	4	4	93,054	0	0	0	0	93,054

Please note that Corporate Groups **are not required** to report opportunities with a payback greater than 4 years. Reporting this data is voluntary.

Table 2.3 - Details of significant opportunities identified in the assessment

The tables below describe 3 examples of significant opportunities for improving the energy efficiency of the group that have been identified in assessments.

Description of Opportunity No 1	Voluntary Information	
Weight Reduction One of the fundamental aspects of reducing fuel burn and increasing efficiency is to minimise unnecessary weight being carried on board the aircraft. Additional weight penalties are a function of the amount of additional weight carried by the aircraft, the type of aircraft, the length of the sector and where the extra weight is being carried in the aircraft relative to the centre of gravity. Over the course of the fuel optimisation program, the reduction of weight not associated with payload has been an ongoing initiative. Success has been achieved through initiatives such as: - Light weight pantry equipment - Potable water optimisation - Fuel policy optimisation - Transition to digital flight deck documentation Depending on the aircraft and sector combination, a reduction in fuel burn consumption due to weight reduction of approximately 5% to 35% has been achieved across the fleet.	Equipment Type	Fuel Optimisation
	Business Response	Implemented
	Energy saved (GJ)	17,296 GJ
	Greenhouse gas abated (CO_2-e)	1,204 t. CO_2-e
	$s saved	
	Payback period	

Description of Opportunity No 2	Voluntary Information	
Auxiliary Power Unit (APU) Usage Reduction Most large air transport aircraft rely on a source of electrical power and air conditioning whilst on the ground when the engines are off. Most aircraft are equipped with an onboard Auxiliary Power Unit (APU) which is a small onboard turbine engine, powered by the aircraft's jet fuel supply. Whenever the APU is operating in order to power the aircraft's electrical and air conditioning system, it is burning a significant amount of fuel. Over the course of the fuel optimisation program, there has been an ongoing initiative to minimise APU usage through the provision of alternative power sources. Using a ground based diesel generator typically uses 10 percent of the amount of jet fuel consumed by the APU in providing electrical power and pre-conditioned air to the aircraft. Other alternatives include using ground based grid power supply as well as regulating the use of air conditioning power on a need only basis. It has been determined that the reduction in APU usage has saved approximately 38,725 GJ annually, with an equivalent greenhouse gas emissions reduction of 2,696 t.CO_2-e.	Equipment Type	Fuel Optimisation
	Business Response	Implemented
	Energy saved (GJ)	38,725 GJ
	Greenhouse gas abated (CO_2-e)	2,696 t. CO_2-e
	$s saved	
	Payback period	

Description of Opportunity No 3	Voluntary Information	
Flight Planning Developments Efficiency in flight relies heavily on accurate flight planning. Accurate flight planning relies on an accurate estimation of payload weight. The fuel policy guarantees that sufficient fuel will be carried for a safe flight, however carriage of an excessive amount of fuel results in additional fuel burn for the cost of carriage of the additional fuel. Historically, aircraft that operate high frequency short haul domestic flights were given flight plans ahead of time for their day's flying. The Qantas product offering allows passengers the flexibility to change their flight at short notice, meaning that the estimated payloads for domestic flights can fluctuate significantly up until the departure time. The Single Sector Flight Planning program allows for updated flight plans to be delivered closer to the departure time, where the estimation of the aircraft's zero fuel weight will be more accurate. As such, the fuel can be planned more accurately, in many cases reducing the amount that is required to be uplifted which in turn reduces overall fuel burn. It is estimated that the implementation of accurate flight planning has lead to an annual energy saving of 35,810 GJ.	Equipment Type	Fuel Optimisation
	Business Response	Implemented
	Energy saved (GJ)	35,810 GJ
	Greenhouse gas abated (CO_2-e)	2,493 t. CO_2-e
	$s saved	
	Payback period	

Part 3 – Transition to Second Cycle

This table has been completed as the Qantas Group has a 2005-06 trigger-year, and is subsequently transitioning to the second cycle.

In December 2011 the Qantas Group reported energy efficiency opportunities that were still under investigation as at 30 June 2011. This report outlines the business response to these opportunities – implemented or not to be implemented. The Qantas Group will further investigate these opportunities, and as such they will be reported in future Public Reports as opportunities identified in the second cycle.

1st Cycle Opportunities transferring to the 2nd Cycle

Status of opportunities identified to an accuracy of better than or equal to ±30%		Total Number of opportunities	Estimated energy savings per annum by payback period (GJ)						Total estimated energy savings per annum (GJ)
			0 – 2 years		2 – 4 years		> 4 years		
			No of Opps	GJ	No of Opps	GJ	No of Opps	GJ	
As reported in December 2011	Under Investigation	4	4	31,888	0	0	0	0	31,888
Business Response as at 30 June 2012	Implemented	2	2	4,346	0	0	0	0	4,346
	Not to be Implemented	0	0	0	0	0	0	0	0
	To be evaluated/reported in the second cycle	2	2	27,543	0	0	0	0	27,543

New opportunities identified within the 2nd cycle (ie FY12)

Status of opportunities identified to an accuracy of better than or equal to ±30%		Total Number of opportunities	Estimated energy savings per annum by payback period (GJ)						Total estimated energy savings per annum (GJ)
			0 – 2 years		2 – 4 years		> 4 years		
			No of Opps	GJ	No of Opps	GJ	No of Opps	GJ	
Business Response	Implemented	2	1	36,234			1	1,318,129	1,354,363
	Implementation Commenced	0	0	0			0	0	0
	To be Implemented	0	0	0			0	0	0
	Under Investigation	11	0	0	3	521,256	8	867,006	1,388,262
	Not to be Implemented	0	0	0			0	0	0
Outcomes of assessment	Total Identified	13	1	36,234	3	521,256	9	2,185,135	2,742,624