QANTAS

29 September 2008

Senator Mathias Cormann
Chairman
Select Committee on Fuel and Energy
PO Box 6100
Parliament House
Canberra ACT 2600

Dear Senator Cormann

Re: Select Committee Fuel and Energy Inquiry

I refer to your letter of 14 July 2008 to Mr Geoff Dixon inviting Qantas to make a submission to the above inquiry.

We welcome the opportunity to provide comments on some of the issues around fuel and energy of key importance to the Qantas Group's operations and the long term sustainability of the Australian aviation industry. These include the impact of higher jet fuel prices and an emissions trading scheme on the competitiveness of our business and associated industries such as tourism; domestic energy supply and investment in infrastructure; and the role of alternative fuels.

We would be pleased to provide any further information if it would be of assistance and to appear at Committee hearings if invited to do so.

Yours sincerely

David Hawes
Group General Manager
Government and International Relations

oneworld

Qantas Airways Limited ABN 16 009 661 901
Level 4 Optus Centre 10 Moore Street GPO Box 933 Canberra Australian Capital Territory 2601 Australia
Telephone 61 (2) 6250 8211 Facsimile 61 (2) 6250 8319

qantas.com

QANTAS AIRWAYS SUBMISSION

SELECT COMMITTEE FUEL AND ENERGY INQUIRY

The aviation industry and higher petroleum prices

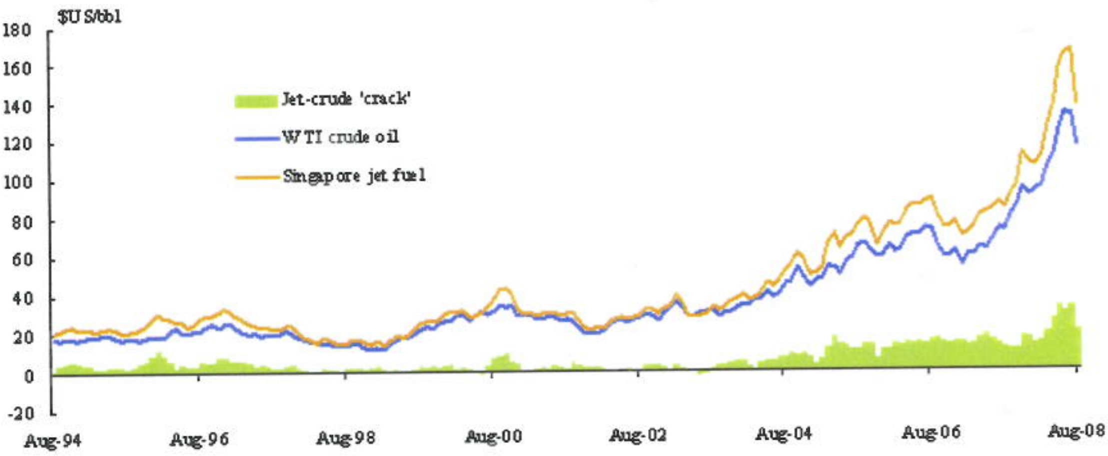
The price of fuel is a key challenge for the aviation industry, both in Australia and globally. Described as the 'perfect storm' by the International Air Transport Association (IATA), the current environment of uncontrollable fuel prices and falling demand has the aviation industry facing USD99 billion in extra fuel costs in the year ahead.

IATA has reported that 25 airlines have ceased operations, which is a greater number than immediately following September 11 2001. Airlines globally have embarked on a range of capacity and staff reductions, and other cost-cutting measures, as the ability to successfully pass on rising fuel costs becomes very limited.

Qantas has not been immune from these pressures. Fuel is forecast to account for around 35% of the Qantas Group's total costs – an increase of $2 billion since 2006/07.In 2007, the average price for West Texas Intermediate (WTI) oil was USD72 per barrel and USD87 per barrel for Singapore jet fuel. At current jet fuel prices of around USD110 per barrel, down from a recent peak of above USD180 per barrel, the Group's fuel bill is forecast to rise by $1.6 billion in 2008/09.

The volatility of oil prices increases the cost associated with using financial instruments to protect (or hedge) against higher oil prices. On 22 September 2008, the price for WTI rose more than USD16 per barrel, the largest one day increase on record. Moreover, the refining premium paid for jet fuel over crude oil, known as the jet-crude 'crack', has been widening over recent years (refer to Chart 1). The 'crack' for the month of August was around USD21 per barrel, following three consecutive months of averaging above USD30 per barrel and a peak of over USD40 in July, adding further to fuel costs.

Chart 1: World oil and jet fuel prices



Source US Energy Information Administration

Although surcharges are used to offset increases in the price of fuel, they do not fully compensate for increases in the Qantas Group's fuel costs. While additional measures, such as further cutting other costs and increasing fuel efficiency, are and will continue to remain an important feature of the operating environment, a significant gap remains.

The Qantas Group has long recognised the need to realise operational efficiencies and reduce costs, embarking on a range of initiatives. Since the inception of the Group's Sustainable Future Program in 2003, permanent cost savings of over $3 billion, representing a 20-25% reduction in the cost base, has been achieved. It is forecast that that a further $1.5 billion of additional benefits and efficiencies will be realised over the next 3 years. More recently, in response to record oil prices, Qantas has announced a range of additional cost saving measures including recruitment and executive pay freezes, accelerating the retirement of less efficient aircraft, a fuel conservation program and capacity reductions.

Rising fuel costs have an indirect effect on consumers, as the price of petrol now consumes a greater proportion of household income. As an 'inelastically demanded' good – that is, demand is relatively unresponsive to price changes - motor vehicle fuel reduces discretionary spending. This decline in discretionary spending combined with higher airfares – due to higher oil prices – is apparent in the aviation industry, with international passenger growth slowing to a five year low of 1.9% in July 2008 according to IATA, following growth of 7.4% in 2007.

Reduced expenditure due to higher fuel prices also has implications for aviation dependent industries, such as tourism. As an island nation with a large land mass, Australia is heavily reliant on aviation services to facilitate tourism flows, particularly international visitors. Higher fuel prices adversely affect the inbound tourism industry as travellers may opt to fly shorter distances or not at all.

Aviation has a critical role in providing links both to and from regional areas of Australia. The vast distances between towns and the relatively small population of many of the regional areas of Australia mean that safe, reliable and affordable air transport services are vital to these communities. However, in times of cost pressures, such as rising oil prices, 'thin' regional routes are particularly vulnerable.

The significant investments that Qantas has made in new generation, fuel efficient aircraft will be important in mitigating fuel price impacts. We are replacing our Boeing 767 and 747 fleets with Boeing 787 and Airbus A380 aircraft. The B787 will offer a 20% reduction in fuel consumption per passenger compared to the B767, and the A380 will offer a 10% reduction in fuel consumption per passenger compared to the B747. The Group is investing around $2 - $3 billion each year towards the ongoing growth and renewal of our fleet and is targeting a greater than 25% improvement in fuel efficiency out to 2020.

Domestic energy supply

The Australian energy market is reliant on substantial imports of petroleum products. In 2006/07, 25% of total petroleum products were imported to meet demand and, according to Caltex, is estimated to rise to 30 – 40% by 2015 and 50 – 70% by 2030. At these levels, imports are a structural necessity in the domestic energy market and, as a net importer of jet fuel, Australia is dependant upon supply chain efficiencies in order to meet growing demand.

Demand for total petroleum products in Australia has been growing by 2% per annum, with jet fuel growing at around 5% per annum according to the Australian Institute of Petroleum. In Sydney, jet fuel consumption has grown from one billion litres in 1990 to 2.3 billion litres in 2007 – an increase of 43%. Around 33% of this is imported, which places further reliance on external markets and the reliability of the supply chain.

Also stimulating demand is the competitive landscape of fuel suppliers in Australia, which has changed significantly over the past two decades, falling from eight suppliers to four. The absence of independent companies which import, distribute and sell fuel, has placed further pressure on the four major oil refiners to meet ground fuel requirements of supermarket retailers. The increased demand for diesel and gasoline has placed upward pressure on refineries to meet jet fuel yield.

An integral aspect of the supply chain is the capacity of Australian refineries, which has been declining in recent years. Rationalisation in the Australian oil refining industry resulted in the closure of the ExxonMobil refinery at Port Stanvac in 2003, which saw total domestic capacity fall by 9% and reduced the number of operational refineries to seven. The capacity of these remaining refineries is further diminished as their aging refinery assets experience longer and more frequent down time.

Adding further complexity to the supply chain more generally is the move to cleaner fuel standards in Australia. In 2002 Australian fuel quality standards mandated a range of specifications for all fuel sold in Australia. Since 2006, under these standards, diesel must meet a low sulfur specification of under 50ppm, which will decrease to under 10ppm in January 2009. To maintain compliance with clean fuel standards and higher grade gasoline, such as Octane 98, refineries have embarked on intensive capital works to modify the distillation 'cut'. As a result of this, there has been a 6 – 7% loss of jet fuel production.

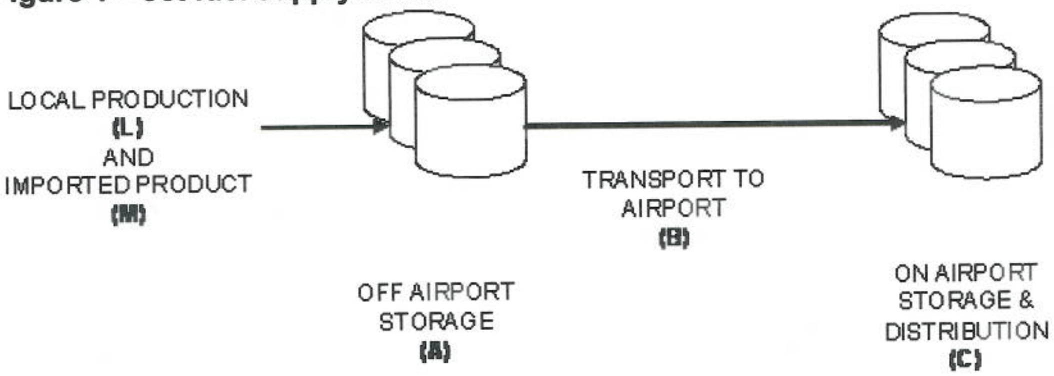
Due to the reduced refinery capability and capacity, combined with rising demand, there is a growing dependence on jet fuel imports to supplement supply. By increasing local production of jet fuel, Australia could move from net import to a supply and demand balance, alleviating some of the issues outlined above. This can be achieved by encouraging investment in existing refining capacity or additional Australian refining capacity. Government incentives could also be effective in driving investment and attracting new entrants to the local refining market.

Future investment in fuel and energy infrastructure

The growth in demand for jet fuel has not been met by a corresponding increase in local supply, leading to increased import requirements and driving the price towards Import Parity Pricing (IPP). While price increases would normally be expected to attract new suppliers and competition, with an impact on jet fuel supply and pricing, the interplay of these market forces has been severely restricted by the lack of open access to jet fuel supply infrastructure in Australia.

The jet fuel supply chain is made up of three main categories including off-airport storage (A), transport to airport (B) and on-airport storage and distribution (C) (refer to Figure 1).

Figure 1 – Jet fuel supply chain



The oil companies own a majority of this infrastructure. Table 1 shows the supply chain for each major Australian port and the owner of each part of the supply chain.

Table 1 – Australian airport jet fuel infrastructure ownership

Port	Sydney	Melbourne	Brisbane	Adelaide	Perth	Darwin
Supply (L&M)	- Local - Import	- Local - Import	- Local - Import	- Import	- Local - Import	- Import
Off Airport Storage (A)	- 3rd Party - Airline (QF) - Oil Co	- Oil Co	- Oil Co	- Oil Co	- Oil Co	- 3rd Party
Transport To Airport (B)	- Oil Co (2 x P/L)	- Oil Co - 3rd Party (P/L & Trucking)	- Oil Co (2 x P/L)	Oil Company (Trucking)	Oil Company (1x P/L)	Oil Company (Trucking)
Airport Storage and Distribution (C)	- Joint Venture between Oil Companies and Airline (QF)	- Joint Venture between Oil Companies	- Joint Venture between Oil Companies	- Joint Venture Storage Oil Company - Airport Owned Distribution System	- Joint Venture between Oil Companies	- Joint Venture between Oil Companies

By controlling at least one part of the supply chain in each major Australian port, existing suppliers have been able to make it almost impossible for new suppliers to enter the market.

Of the ownership structures in each of the ports, Sydney and Melbourne are the only examples where a non-oil company has bought into jet fuel infrastructure. In Melbourne, Colonial Mutual owns 12.5% of the Somerton supply pipeline, while at the Sydney Joint User Hydrant Installation (JUHI) Qantas purchased a share of the on-airport storage and international distribution facilities in 1988 and bought into the domestic distribution facilities in 2004. However, the Sydney JUHI has stringent requirements and high costs which are prohibitive to smaller operators wanting to participate, and does not offer an itinerant rate - for example a throughput arrangement - without necessary equity investment.

The constraints on market forces are also apparent through disruptions in supply. As the largest consumer of jet fuel in Australia, Qantas has felt the impact of structural shortages, experiencing over 23 supply disruptions at 14 Australian ports since 2003. These shortages are the result of a combination of factors such as constrained refinery capacity, aging assets and poor supply planning.

The impacts of supply disruptions on airlines are varied and depend on the severity and length of the disruption (refer to Table 4 in Appendix). As Australia is relatively isolated from potential re-supply sources and other Australian ports, disruptions have tended to be serious and costly.

In March 2007, Qantas commenced self-supply of jet fuel in Sydney to improve supply reliability, using a throughput arrangement for both storage and pipeline. Although this additional supply source in the Sydney basin has lessened the impact of supply disruptions for the airline industry, the ability to increase self-supply volume is restricted as a result of limited access to the Caltex owned pipeline.

There are many alternative ownership structures for jet fuel infrastructure which are in place globally (refer to Table 2). In the United States, there is open access to jet fuel infrastructure whereby fuel infrastructure to supply the airports is owned by consortiums of airlines and run by third party operators. This ownership structure keeps costs under control and ensures that industry solutions are applied in the event of disruption of supply.

Table 2 – Global jet fuel infrastructure ownership

Potential Structure							
	Ownership	**3rd Party Owned**	**Airport Owned**	**Government Owned**	**Airline Owned**	**Oil Company & Airline**	**Oil Company Owned**
	Operator	**3rd Party Owned**	**3rd Party Operated**	**3rd Party Operated**	**3rd Party Operated**	**Oil Company Operated**	**Oil Company Operated**
Price		Published	Consultative	Consultative	Member Cost Recovery / Non-Member Published Rate	Member Cost Recovery / No Published Rate	Hidden in Fuel Cost
Access		**Open**	**Open**	**Open**	**Open**	**Limited**	**Restricted**
Applicable Infrastructure		A B C	B C	A B C	B C	B C	A B C
Examples		Buckeye and Chicago Pipelines (US)	Hong Kong Airport (Operated by AFSC)	UK Pipelines	LAXFUEL - Owned by Airlines Operated by ASIG (Los Angeles)	Sydney Airport Joint User Hydrant Installation	All Australian Airports Except Sydney
Number of Suppliers		6	11	7	11	5	1 to 4 (See Table 5 in Appendix)

Legend	**A**	Off Airport Storage
	B	Transport to Airport
	C	On Airport Storage & Distribution

The supply/demand equation could move into balance by increasing local production. This can be achieved through investment in existing refining capacity or by adding new Australian refining capacity. Investment could be driven by government incentives to increase local production, which may also attract new entrants to the local refiner market.

To encourage short term investment by local industry and incumbent suppliers in existing infrastructure, government could offer incentives, such as those used for the introduction of clean fuel specifications. For example, this could include production subsidies and an excise differential.

In Australia, current ownership structures may be preventing potentially willing third party investors from providing capital needed to upgrade existing jet fuel supply infrastructure. As there is a risk of investment duplication, government intervention would be required in negotiations to drive a consolidated approach and ensure available capital is utilised to improve jet fuel supply infrastructure.

In the absence of these solutions, policy covering essential jet fuel infrastructure should be revised to allow access to ownership and price transparency.

The impact of an emissions trading scheme on domestic aviation

The Qantas Group has been actively engaged in the Australian Government's Green Paper process and consultations for the Carbon Pollution Reduction Scheme (CPRS). As a producer of greenhouse gases, we acknowledge that aviation has a role to play in reducing the impact of climate change and we are taking steps to reduce our environmental impact.

Under current proposals, the CPRS Green Paper does not recognise aviation as 'Emissions Intensive Trade-Exposed' (EITE) or 'strongly affected' and would have airlines pay for 100 per cent of their carbon permit obligations immediately. Unlike many other emissions intensive industries, aviation will not be given transitional assistance.

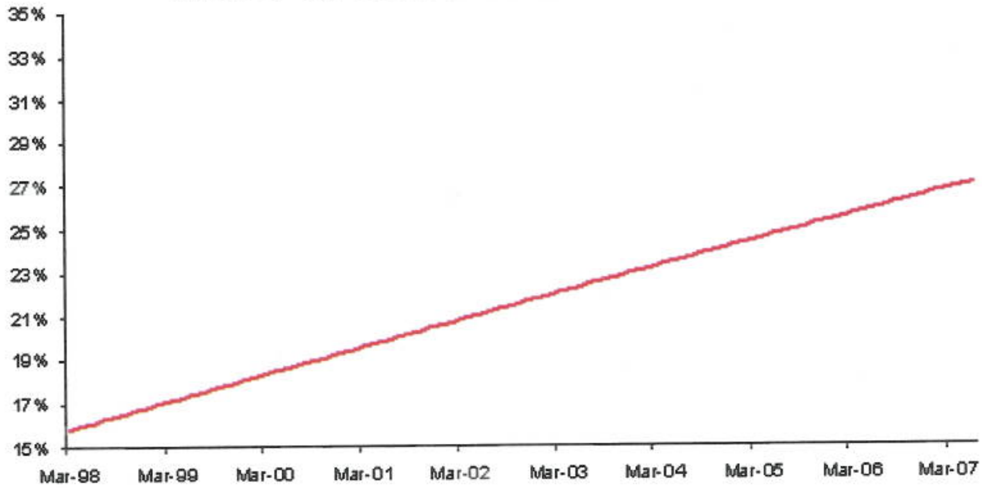
The impact on domestic aviation will be extensive as the ability to offset the introduction of a carbon cost is limited. The introduction of an emissions trading scheme would effectively increase the cost base of airlines, just as the rising cost of fuel has, with associated negative implications for regional communities and the tourism industry.

In the case of aviation and possibly other industries, the elasticity of demand tends to vary with the business cycle. In periods of strong economic growth, demand tends to be less elastic and the ability to pass on costs is higher. When economic activity is weak, demand tends to be more elastic and cost passthrough is low. This is the situation aviation is now facing.

Demand for air travel is, largely, a form of discretionary spending. Leisure travel in particular has a price elasticity of demand that is higher than most other industries, particularly other carbon intensive industries such as the electricity and road transport sectors. As consumers are able to substitute different modes of domestic transport, such as road transport, which will receive compensation in the form of relief from fuel taxes under the CPRS, domestic aviation faces strong competition.

Over the past 10 years, aviation's share of domestic transportation grew from 15% to 27% as a result of lower airfares, an increase in the number of destinations that are serviced by domestic carriers, as well as petrol prices growing at a faster rate than airfares, making air travel relatively less expensive than driving a car (see Chart 2). However if the price of domestic air travel were to rise, the availability of alternative modes of transport could see further weakening of demand. This has implications for the ability of domestic airlines to pass any carbon costs through the form of higher airfares.

Chart 2 - Air Share of Domestic Travel Market



Source: Tourism Research Australia, National Visitor Survey

While fuel surcharges in the past have been implemented with limited impact on demand, this has been the result of (1) a very strong domestic economy, (2) limited capacity growth and (3) the market introducing surcharges around the same time. Two of these three pre-conditions will not be characteristic of the market over the coming years, so in the short-run domestic aviation could expect that carbon surcharges would operate with limited success when compared with past fuel surcharges. This will also be the case for future fuel surcharges.

Using a model of oligopolistic competition which represents the structure of the Australian domestic aviation market, the long run carbon cost passthrough is estimated to be 60% for a single full service carrier and 83% for a group of three low cost carriers. In the case of a single full service carrier, a 60% cost passthrough implies that for every $1 in additional cost, only 60 cents of this is recouped after taking into consideration the impact of the price increase on demand. Therefore, when applying this principle to model the impact of the CPRS on domestic aviation, it can be said that assuming an imposition of a $20 per tonne of carbon cost, only $12 per tonne will be recouped by the full service carrier, while $16.60 per tonne will be recouped by low cost carriers.

The carbon cost under an emissions trading scheme is likely to be regressive. Both high and low income earners will pay around the same carbon bill per trip for the same trip distance. This implies that as a proportion of income, low income earners will pay more for carbon per trip than will high income earners. As leisure travel has relatively elastic demand, travellers such as families on holidays will have to bear increased carbon costs as part of their low cost travelling budget.

Under an emissions trading scheme, the introduction of a 'deadweight' carbon cost will add further pressure to reduce the footprint of our Australian operations to ensure the continued viability of our business, which means fewer Australian jobs, less investment and the potential for a reduced domestic aviation network.

Domestic aviation and tourism are trade-exposed under the introduction of an emissions trading scheme. As both are relatively responsive to changes in price, significant potential for substitution to other destinations is likely as the price of Australian domestic airfares and holiday packages increase.

Australia's domestic aviation and tourism markets compete against short and medium haul international destinations. Adding a cost of carbon to domestic aviation will lead to substitution to other markets such as Fiji, Vanuatu, Bali, New Caledonia, Thailand and Vietnam. This destination competition places downward pressure on the ability to pass on carbon costs.

In recent years, a stronger Australian dollar and the introduction of low cost international capacity have contributed to a significant switch from domestic travel to international outbound travel. Since October 2006, international growth has averaged in excess of 13% per annum compared to just under 8% for domestic travel. This gap could be expected to increase under the proposed emissions trading scheme.

The effect of the introduction of a carbon cost on air travel will also have ramifications for regional Australia. The introduction of an emissions trading scheme will increase the cost base of airlines in a way that is analogous to a permanent increase in fuel costs. Regional aviation will be disproportionately impacted by this, with many regional routes becoming ever more marginal.

The CPRS will also threaten regional dispersal, for example plans by Jetstar to grow Darwin as a new hub for long haul flying. This strategy funnels traffic through Jetstar's domestic network from ports such as Melbourne, Sydney, Brisbane and Adelaide through Darwin and then to near Asian ports such as Ho Chi Minh City, Denpasar and Singapore. The domestic legs of these Jetstar flights will attract a carbon charge while carriers flying over the top of Darwin will not be subject to any carbon charge at all. This will erode any price advantage that Jetstar's Darwin hub strategy was designed to deliver against competitors and risk the development of Darwin as a viable northern hub.

Finally, all Qantas Group operations based in Australia will be subject to higher input costs, further disadvantaging Qantas and Jetstar international operations against international carriers that will not be subject to similar input cost increases.

Role of alternative jet fuels

A sustainable aviation sector over the long term will depend on the development of alternative fuels that are commercially viable and generate low carbon emissions over the 'life cycle'. In partnership with the aviation industry, the Australian Government has an important role to play in accelerating the development of alternative jet fuels.

Until recently, a commercially viable alternative to jet fuel was considered to be at least a decade away. However, the current price of fossil fuels, environmental issues and concerns about energy security are driving increased interest in alternative jet fuels. There have been promising developments, for example, Air New Zealand has announced plans to test a plant-based alternative jet fuel by the end of 2008.

Substitutes for traditional jet kerosene, such as synthetic fuel and biofuels derived from biomass (biodiesel) are currently being developed. To be acceptable, these alternative aircraft fuels must be assessed against Jet A1 specifications and key sustainability and commercial criteria (see Table 3).

Table 3 – Alternative aircraft fuels specifications

Sustainability	• Low carbon emissions over life cycle • Does not encroach on arable land used for food production • Not a food stock • No deforestation
Technical	• Good thermal stability • Very low freeze points - Jet A1 min -47 degrees C • High energy content: (min 42 MJ/KG)
Commercial	• Less expensive than current jet fuel • Must be 'drop in' (no modification is required to engines or fuel delivery systems) • Must be available in scaleable quantities at points of distribution

Significant issues exist for aviation with both synthetic and biofuels. Manufacturing processes for current synthetic fuels (obtained from coal, natural gas or biomass) emit large quantities of carbon dioxide and the overall emissions footprint can be much greater than using standard oil derived from Jet A1. Qantas, along with all carriers flying out of Johannesburg, has been using a mix of 50% coal-based synthetic fuel and conventional Jet A1 produced by SASOL in South Africa. SASOL is applying for approval to move to 100% and although this mix has been supplied for many years with no known adverse effects, it would only become environmentally sustainable if coupled with carbon capture and storage technology.

First generation biofuels, made from corn and other biomass, do not meet a range of aviation standards required for alternative aircraft fuels. They have less than optimal thermal stability (freezing at cold temperatures), form deposits in high temperature portions of jet engines and have low energy content. These first generation biofuels also require large amounts of arable land and water for their production, and therefore compete with food crops.

Similarly, hydrogen is not a realistic alternative to jet fuel as it does not meet a number of specifications. Hydrogen-based fuel would need completely new aircraft and infrastructure, require extremely low temperatures to remain in liquid form and, given the extremely low energy content (approximately 25% of Jet A1), is unlikely to be viable for commercial aviation.

The emerging industry consensus is that although plant-based fuels, such as Jatropha, will become commercially viable first, algae has higher potential and will be the larger volume player in 10 to 15 years. Recent market developments - as undertaken by Virgin Fuel, Air New Zealand, Boeing, KLM, Airbus and JetBlue - reflects this preference for algae as the most viable long-term alternative. The industry would envisage building alternative fuel facilities that could switch from plant-based feedstock to algae when it matures commercially. However, the cost of production is high due to limited scale and high 'into wing' costs due to transportation to the point of uplift.

Although there is currently very little capacity, the aviation industry would envisage building alternative fuel facilities that could switch from plant-based feedstock to algae when it matures commercially. It will take five to 10 years to reach commercial scale. Government could support this process by providing crown land for growth of third generation biomass (algae and Jatropha) and ensuring that sufficient suitable land is reserved for energy security purposes.

Many challenges need to be overcome in securing commercial quantities of alternative jet fuels. These include lack of incentive for traditional fuel suppliers to invest in alternatives given the high price of fossil fuels, the need to achieve adequate scale production, and the competition that would be encountered from other fuel uses such as road.

The Government could provide assistance, in the form of co-funding, grants or investment credits, for the commercialisation of alternative fuels through the entire supply chain. This would provide an incentive for investors to develop scale quickly and efficiently. Providing funding for research and development and increasing the deduction for research and development from its current level of 125% would also assist in the reduction of lead times to bring new refining capacity on-line.

Direct support for alternative fuels would be complementary to the Australian Carbon Pollution Reduction Scheme (CPRS). To encourage investment in alternative fuels, the Government could de-couple the price of approved alternative fuels and Jet A1 through reduced excise for low emissions fuel. Fast tracking regulatory approvals for use of alternative fuels and an alternative fuel target for the economy could also drive investment and assist in the development of commercially viable and environmentally sustainable alternatives.

In addition, the Government could encourage the rapid deployment of emerging and breakthrough technologies through the introduction of an accelerated 'green' depreciation regime, reducing the aircraft tax depreciation effective life from the current 10 to three years – in line with the schedules applicable to Qantas' major airline competitors.

Also of benefit would be the re-introduction of an investment and development allowance that includes aircraft or allowing depreciation for amounts greater than 100% of the expenditure, say 125%. This would encourage companies in capital intensive industries to re-invest in income producing assets and thereby increasing business productivity. Some of our major international competitors, such as Singapore Airlines, already enjoy investment allowances ranging from 20 – 60% of the cost of the equipment, resulting in tax benefits of 120% to 160%. The reintroduction of the investment allowance would also increase Qantas' cash flow and further support investment in more fuel efficient fleet.

APPENDIX

Table 4 – Jet fuel supply disruptions (2003-current)

PORT		START DATE	FINISH DATE	SUPPLIER	Consequence	Potential Consequence
Sydney	SYD	18-Sep-03	13-Oct-03	Shell, Caltex. BP XOM	< 2 Days Stock Allocations (64-90%) Large Cost to Airline	Low conductivity fuel may build up static & provide an ignition source during the filtration
Sydney	SYD	26-Aug-05	01-Sep-05	Shell, Caltex. BP XOM	< 2 Days Stock Allocations (40-90%) Large Cost to Airline	Low conductivity fuel may build up static & provide an ignition source during the filtration
Sydney	SYD	23-May-06	09-Jun-06	Caltex	< 2 Days Stock No Action Required	Low conductivity fuel may build up static & provide an ignition source during the filtration Large Cost / Delays to Airlines
Sydney	SYD	21-Jun-06	05-Jul-06	XOM, Shell	< 2 Days Stock	Large Cost / Delays to Airlines
Sydney	SYD	04-Oct-06	27-Nov-06	Shell	< 2 Days Stock	Large Cost / Delays to Airlines
Ayers Rock	AYQ	12-Nov-06	13-Nov-07	BP	Max Tankering into AYQ No Unscheduled Flights	Aircraft Delayed in AYQ for the night with no fuel.
Hobart	HBA	11-Dec-06	13-Dec-06	BP	< 2 Days Stock No Action Required	Large Cost / Delays to Airlines
Hobart	HBA	11-Dec-06	14-Dec-06	BP	< 2 Days Stock No Action Required	Large Cost / Delays to Airlines
Cairns	CNS	16-Feb-07	14-Mar-07	Caltex, Shell	< 2 Days Stock No Action Required	Large Cost / Delays to Airlines
Melbourne	MEL	02-Apr-07	04-Apr-07	Shell, Caltex. BP XOM	< 2 Days Stock No Action Required	Large Cost / Delays to Airlines
Port Headland, Broome	PHE	12-Jul-07	13-Jul-07	BP	< 2 Days Stock Max Tankering into PHE and BME Min Fuel Available	Aircraft Delayed in AYQ for the night with no fuel.
Karratha	KTA	13-Aug-07	14-Aug-07	BP Shell	< 2 Days Stock Max Tankering into KTA Min Fuel Available	Aircraft Delayed in AYQ for the night with no fuel.
Sydney	SYD	24-Aug-07	01-Nov-07	Shell/QF	< 2 Days Stock on Specification Dom Terminal taken off Hydrant Large Delays due to Tanker refuelling	Low conductivity fuel may cause sparking and Fire during fuelling operations
Melbourne	MEL	22-Oct-07	29-Oct-07	Shell, Caltex. BP XOM	< 2 Days Stock No Action Required	Large Cost / Delays to Airlines
Brisbane	BNE	13-Nov-07	16-Nov-07	Shell, Caltex. BP XOM	< 2 Days Stock No Action Required	Large Cost / Delays to Airlines
Hobart	HBA	03-Dec-07	03-Dec-07	BP	< 2 Days Stock No Action Required	Large Cost / Delays to Airlines
Sydney	SYD	21-Dec-07	24-Dec-07	Shell	< 2 Days Stock No Action Required	Large Cost / Delays to Airlines
Sydney	SYD	21-Jan-08	Ongoing	CTX, Shell	No Action Required	Large Cost / Delays to Airlines
Melbourne	MEL	08-Feb-08	11-Feb-08	XOM	< 2 Days Stock Allocations of 100% for all Airlines No Unscheduled Flights	Large Cost / Delays to Airlines
Karratha	KTA	26-Apr-08	28-Apr-08	Shell	< 2 Days Stock No Action Required	Large Cost / Delays to Airlines
Thangool	THG	28-Apr-08	28-Apr-08	Shell	No Fuel Available Max Tankering required Large Delays of up to one hour	Large Cost / Delays to Airlines
Darwin	DRW	16-May-08	22-May-08	BP	Allocations of 75% for all Airlines Max Tankering required Large Cost to Airlines	Large Cost / Delays to Airlines High Conductivity may corrode different sections of the supply line as well as increasing the risk of a spark or fire.
Mackay Hamilton Island Proserpine	MKY HTI PPP	22-Jun-08	23-Jun-08	Shell, Caltex	Large delays of up to 3 hrs. No Fuel Available Max Tankering around into MKY Tech Stops were required due to tankering ability of aircraft	If the Thermal Stability of the fuel is affected it may cause hot spots in the engines and loss of fuel flow.
Sydney	SYD	15-Jul-08	28-Jul-08	Shell, Caltex, BP, Exxon	< 2 Days Stock No Action Required	Low conductivity fuel may build up static & provide an ignition source during the filtration Large Cost / Delays to Airlines

APPENDIX

Table 5 - List of fuel suppliers at Qantas Domestic RPT Ports

IATA CODE	PORT	SUPPLIERS
ABX	Albury	Exxonmobil
ADL	Adelaide	Exxonmobil, Shell, BP
ARM	Armidale	Shell
ASP	Alice Springs	Shell, BP
AVV	Avalon	Shell
AYQ	Ayers Rock	Shell, BP
BCI	Barcaldine	Shell
BDB	Bundaberg	Shell
BKQ	Blackall	Shell
BLT	Blackwater	Shell
BME	Broome	Exxonmobil, BP
BNE	Brisbane	Shell, BP, Caltex
BNK	Ballina	Shell
CBR	Canberra	Shell, Caltex
CFS	Coffs Harbour	Exxonmobil, Shell
CNS	Cairns	Caltex, Shell
CTL	Charleville	Shell
DBO	Dubbo	Exxonmobil, Shell, BP
DPO	Devonport	Exxonmobil
DRW	Darwin	Shell, BP
EMD	Emerald	Shell
GLT	Gladstone	Shell
GOV	Gove	BP
HBA	Hobart	BP
HID	Horn Island	BP
HTI	Hamilton Isl.	Shell
HVB	Hervey Bay	Exxonmobil

IATA CODE	PORT	SUPPLIERS
ISA	Mt Isa	Shell
KGI	Kalgoorlie	BP
KTA	Karratha	BP
LDH	Lord Howe	Shell
LRE	Longreach	BP
LST	Launceston	BP
MCY	Maroochydore	Shell
MKY	Mackay	Caltex, Shell
MEL	Melbourne	Exxonmobil, Shell, BP, Caltex
MQL	Mildura	Exxonmobil
MRZ	Moree	Shell
NTL	Newcastle	Caltex, BP
OOL	Cooloongatta	Shell, Caltex, BP
PBO	Paraburdoo	Shell
PER	Perth	Shell, BP
PHE	Port Hedland	BP
PPP	Prosepine	Shell
PQQ	Port Macquarie	BP
RMA	Roma	Shell
ROK	Rockhampton	Caltex
ZBL	Thangool	Shell
TMW	Tamworth	Shell
TSV	Townsville	Caltex, BP
WEI	Weipa	BP
WGA	Wagga Wagga	Exxonmobil
WOL	Wollongong	Shell
ZNE	Newman	Shell