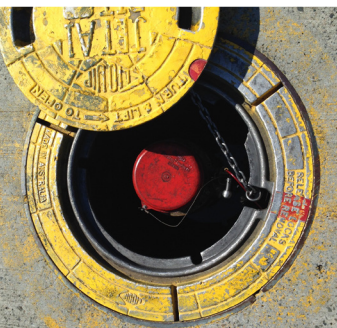




INTERNATIONAL AVIATION POLICY SERIES

A Competitive Supply of Jet Fuel at Australia's Major International Airports



Overview of BARA



The Board of Airline Representatives of Australia (BARA) is the industry body promoting the safe and efficient operations of international airlines serving Australia for the benefit of consumers, businesses and tourism.

BARA's members provide 90 per cent of all international passenger flights to and from Australia.

The role of BARA is to provide a collective voice on major issues that impact on international aviation. The sustainable growth and potential of Australia's international aviation industry depends on the right economic policy framework and legislative and regulatory arrangements.

BARA's Vision and Outcomes

To guide BARA's work and clearly articulate its ideals, BARA's members have developed a *Vision and Outcomes for International Aviation in Australia*, available at www.bara.org.au.

The vision for international aviation in Australia is 'High quality, adaptive and efficient'.

Underpinning this vision, BARA has identified four key outcomes to boost competitiveness, productivity and the financial performance of industry participants. These are:

Outcome 1: Timely and reasonably priced airport infrastructure

Outcome 2: Competitive supply of jet fuel

Outcome 3: Safe and efficient air navigation

Outcome 4: Environmentally sustainable growth

In April 2014, BARA published its policy paper on the need for *Timely and Reasonably Priced Airport Infrastructure*, also available at BARA's website.

A Competitive Supply of Jet Fuel at Australia's Major International Airports

Jet fuel is international aviation's largest cost item, often representing over 40 per cent of an airline's operating costs in Australia. The current uncompetitive supply of jet fuel unnecessarily increases industry costs and constrains growth.

There is much that can be done to create an environment that enables a more competitive, lower priced and reliable jet fuel industry to emerge. Principally, this requires reform to the jet fuel infrastructure supply chains between Australia's ports and aircraft at the airports.

BARA proposes a reform path to allow importers of jet fuel to compete on merit at Australia's major international airports. The new path involves unlocking the jet fuel supply chain through open access and fair pricing. Where necessary, it requires establishing new supply chains owned and operated by companies that do not supply jet fuel to airlines.

The reforms identified are designed to foster a high quality, adaptive and efficient industry. This will have flow-on benefits to the broader economy by promoting growth in the international aviation sector, leading to more affordable business and leisure travel and air freight services to and from Australia.



Executive Summary

Australia's international aviation industry has some major challenges to overcome in seeking to maintain and grow commercially viable passenger and freight services. Foremost among these challenges is an excessive price paid by international airlines for jet fuel due to uncompetitive supply. The jet fuel markets at Sydney, Melbourne and Perth airports are dominated by only one or two effective suppliers.

The cost of jet fuel is especially critical in Australia, with international aviation defined by very long distances between ports, leading to high fuel consumption. Jet fuel is an international airline's highest cost item, often representing over 40 per cent of operating expenses. BARA's members purchase over four billion litres of jet fuel annually in Australia, costing over \$4 billion.

Globally recognised suppliers of jet fuel have been stifled in their efforts to bring competition and lower priced fuel to Australia. Principally, the barriers to competition have been the difficulties in transporting jet fuel from Australia's ports to aircraft at the airports – known as the 'jet fuel infrastructure supply chain'. These supply chains are largely owned by existing fuel companies.

To unlock competition, global fuel suppliers have invested millions of dollars in commercial contracts with infrastructure providers. BARA has also sought infrastructure access declarations under the *Competition and Consumer Act 2010*. Our efforts, though, to date have not proven successful, largely due to the lack of a comprehensive reform path.

A new reform path

BARA considers that, by working together, the international airlines and owners of the major international airports can create open and competitive jet fuel markets. Jointly, the airlines and airports must achieve:

1. Open and competitively priced off-airport storage facilities
2. Open access to existing jet fuel pipelines or, where necessary, new independently-owned pipelines
3. On-airport storage and distribution facilities that enable a competitive and reliable supply of jet fuel

The airport operators are best placed to secure open access to jet fuel infrastructure supply chains for competing fuel importers. Options include acquiring access to existing facilities, investing in new infrastructure, facilitating investment by third parties and reforming the on-airport storage and distribution facilities.

BARA's member airlines are prepared to support the new arrangements, including financially, through agreed increases in airport charges or a levy on fuel volumes.

Reforming the jet fuel infrastructure supply chains will be no easy task. BARA seeks the Australian Government's support in promoting the fundamental principles of open markets and effective competition and the timely and efficient delivery of new jet fuel supply infrastructure.

BARA will continue to work with all stakeholders and engage in constructive discussions to promote high quality, adaptive and efficient international aviation in Australia.

Jet Fuel Supply

Australia currently imports over 40 per cent of its jet fuel needs. Reliance on imported jet fuel is projected to grow, with the continued decline in domestic production and growth in jet fuel requirements.

Supplying jet fuel to Australia's major international airports is a complex and costly business. The supply chain for an importer of jet fuel can be broken down into two parts. Firstly, supply from an overseas refinery or 'trading hub' to an Australian port. Secondly, transporting the fuel from the port to the aircraft at the airport.

A stylised diagram of the supply chain for a jet fuel importer is shown in the figure to the right.

Barriers to a competitive jet fuel industry

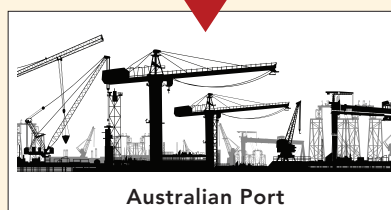
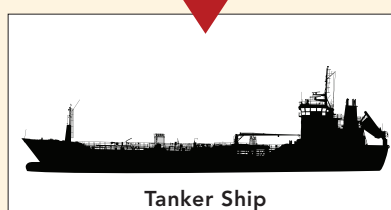
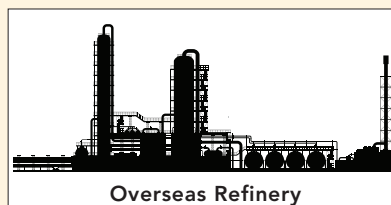
New importers of jet fuel face the critical challenge of gaining access to every segment of the jet fuel infrastructure supply chain in a timely and sequenced manner. To transfer jet fuel efficiently an importer needs access to all the separate elements of the chain in a coordinated way. In Australia, the supply chains are largely owned and controlled by companies that provide jet fuel to airlines – either individually or through joint venture arrangements.

As it stands, new importers are burdened with undue uncertainty and financial risk in gaining access to the jet fuel infrastructure supply chain. There is uncertainty around whether they will be able to secure coordinated access to its various segments, coupled with financial risks including a requirement to pre-purchase access to individual elements without guaranteed access to other parts of the chain.

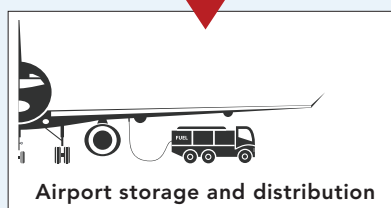
BARA considers that the existing access arrangements are not suited to the needs of a modern aviation industry. Reform is essential in unlocking competition, bringing innovation and efficient pricing to Australia's international aviation industry.

Supply chain for a jet fuel importer

Overseas supply to Australian ports



Jet fuel infrastructure supply chain



The State of Competitive Supply

BARA's members have long been concerned at the lack of competition in jet fuel supply at Australia's major international airports. This has been reflected in the uncompetitive bids received when members tender for jet fuel, particularly at Sydney, Melbourne and Perth airports. BARA's internal research highlights consistently low competitive outcomes as shown in the table below.

Analysis of competitive conditions (supply to wing tip)

	Sydney (Sept 2011)	Sydney (current)	Melbourne (current)	Brisbane (current)	Perth (current)
Number of effective suppliers	2	2	2	3	1
Rating	Poor	Poor	Very poor	Satisfactory	Very poor

Source: BARA's Jet Fuel Working Group.

While outcomes for individual international airlines may vary from time to time, the consensus view is that in most instances there is a lack of effective competition between jet fuel suppliers at three of the four major Australian international airports.

Initiatives to unlock competition

Global fuel suppliers, as well as BARA, have invested substantial time and resources in seeking to bring competition and reform to Australia's jet fuel industry.

For their part, global suppliers have sought to commercially negotiate sufficient levels of access via the current infrastructure owners. This has included renting off-airport storage facilities, 'pre-purchasing' access to jet fuel pipelines and seeking to become members of, or 'participants' in, the on-airport storage and distribution facilities. To date, however, BARA is unaware of any competing suppliers outside some limited self-supply arrangements between Q8 Aviation and Qantas Airways.

In response to these formidable barriers, in September 2011, BARA applied to the National Competition Council (NCC) for declaration of the Sydney jet fuel supply infrastructure under the *Competition and Consumer Act 2010*.

In assessing the state of competition between jet fuel suppliers at Sydney Airport, the NCC stated that 'the Council does not consider the market associated with the supply of jet fuel is effectively competitive nor that there is a vigorously competitive tender market'.

Despite this finding, BARA was unable to obtain arbitrated access, due to a lack of available capacity in the main pipeline, owned by Caltex.

Efforts to date demonstrate the entrenched difficulty in bringing new competitive conditions to Australia's jet fuel industry. Existing commercial and regulatory avenues have not proven capable of enabling effective competition to emerge in an international jet fuel market worth over \$4 billion each year.

¹ National Competition Council (13 March 2011), Jet Fuel Supply Infrastructure at Sydney Airport, Final Recommendations, Paragraph 4.41

The New Reform Path

BARA's goal is to create an environment where competing jet fuel importers are not burdened with undue uncertainty and financial risk. This, in turn, will promote competition on its merits, the competitive pricing of jet fuel and a supply network able to respond to changes in demand.

To bring competition to Australia's jet fuel markets, a new approach is needed in the way the supply chain is structured and managed – from port, to airport, to aircraft.

Three Strategic Reforms



BARA has identified three strategic reforms to unlock the jet fuel infrastructure supply chain, from off-airport storage facilities, to the aircraft at the airport, namely:

- Strategic Reform 1:** Open and competitively priced off-airport storage facilities
- Strategic Reform 2:** Open access to existing jet fuel pipelines or, where necessary, new independently-owned pipelines
- Strategic Reform 3:** On-airport storage and distribution facilities that support a competitive and reliable supply of jet fuel.

International airlines and the international airport owners must take a joint responsibility in implementing these strategic reforms. By working together, the airlines and airports can facilitate a more efficient, competitive and commercially viable international aviation industry in Australia, generating higher passenger numbers, increased trade and greater revenues.

BARA does not underestimate the challenges in implementing the strategic reform path. The reforms will require fundamental changes to the ownership, management and operation of Australia's jet fuel infrastructure supply chains.

Support from the Australian Government, through promoting the principle of open markets as well as streamlined infrastructure approvals, will be essential in implementing BARA's proposed reforms into the future.

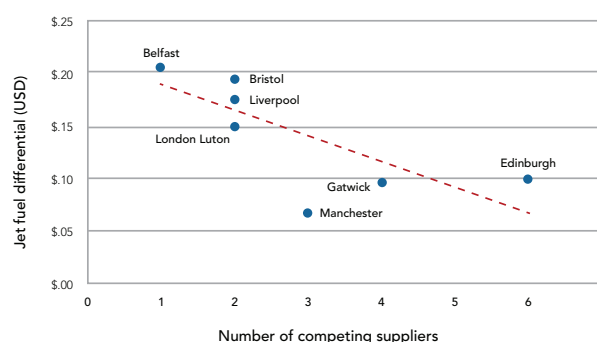


The Benefits of Competitive Reform

Creating competitive jet fuel markets will deliver substantial industry benefits. These benefits extend to lower prices for jet fuel, improved non-price commercial terms and an industry more resilient to unexpected changes in supply and demand.

Statistics produced by ICF International for airports in the United Kingdom demonstrate how increases in the number of effective suppliers results in lower jet fuel prices, as evidenced through lower 'jet fuel differentials'. These represent the difference between the final price for jet fuel paid by airlines and an international benchmark market price. As described earlier, Sydney, Melbourne and Perth airports are dominated by only one or two effective jet fuel suppliers.

Jet fuel differentials and competing suppliers



Source: ICF International (June 20014), Planning of Aviation Fuel Concessions, p. 11

Competitive supply sourcing and supply chain efficiencies

There are increasing opportunities to source competitively priced jet fuel from growing refining capacity in the Asia-Pacific region. Over the last decade, Asia-Pacific refining capacity has increased by about 40 per cent or 130 million litres per day². At the same time, the United States has gradually reduced its jet fuel imports, reducing its demand on this refining capacity.

Opening the jet fuel infrastructure supply chains will enable importers to take maximum advantage of these favourable global market conditions. Competitive jet fuel supply conditions in Australia will ensure the benefits are passed on to airlines, passengers and air freight customers.

Sustained levels of competition will also encourage suppliers to ensure efficiency across the entire industry supply chain. This will lead to innovation and investment in supply chain segments, including shipping logistics, in order to obtain competitive advantage. Effective competition between suppliers at the airport will reduce inefficiencies currently experienced further up the supply chain.

Improved non-price commercial terms and industry resilience

Increased competition will encourage more flexibility on non-price commercial terms from suppliers, such as credit conditions, exchange rates, package deals (where multiple locations are agreed in one tender) and contract term length. These improved commercial terms all contribute to lower operating costs for international airlines.

An increased number of potential suppliers can also reduce the impact of market shocks, which may adversely affect pricing outcomes. Price shocks include supply restrictions, refinery maintenance, exchange rate fluctuations and revised market outlooks.

Finally, effective competition also contributes to supply reliability and industry resilience. More suppliers with differing supply routes can support a more robust and resilient supply chain for the airport.

² BP Statistical Review of World Energy, June 2013.



STRATEGIC REFORM 1

Open and competitively priced off-airport storage facilities

Access to competitively priced off-airport storage facilities is essential to support competitive jet fuel markets. All importers of jet fuel require off-airport storage facilities to allow the fuel to settle and be quality tested before transfer to the airport. To be cost competitive, it is imperative that sufficient volumes of jet fuel pass through the facilities regularly to reduce average costs.

Presently, the off-airport storage facilities in Melbourne, Brisbane and Perth are owned and operated by suppliers of jet fuel. BARA is unaware of any arrangements or conditions that would allow access to these facilities on fair and reasonable terms to new jet fuel importers.

There are independently provided off-airport storage facilities in Sydney, owned by Vopak. The problem in Sydney is the inability of importers to gain sufficient access to the remaining jet fuel infrastructure supply chain. This generates uncertainty for importers in deciding whether to invest in access to off-airport storage facilities. Moreover, this limited access curtails the volumes they can supply, reducing the price competitiveness of Vopak's facilities.

The competitive solution

BARA proposes that, to address this barrier to entry, airport operators should procure off-airport storage options and provide them on fair and open terms to all potential jet fuel importers. This could involve a combination of renting or acquiring existing storages (e.g in Sydney) and investing, or enabling investment in new facilities in Melbourne, Brisbane and Perth. These off-airport storage facilities should have the capability to transfer jet fuel to the airport by both pipeline and road tankers.

Once procured, the airport operator can on-sell access to these facilities to jet fuel importers at an agreed competitive price. BARA envisages that the storage facilities would be on-sold on a competitive per litre basis, removing the financial barrier of fixed rental payments. A volume-based price would be especially beneficial as importers gradually increase their volume of sales at each major international airport.

BARA's proposed initiative would not restrict an importer's ability to use the facilities of existing infrastructure providers.

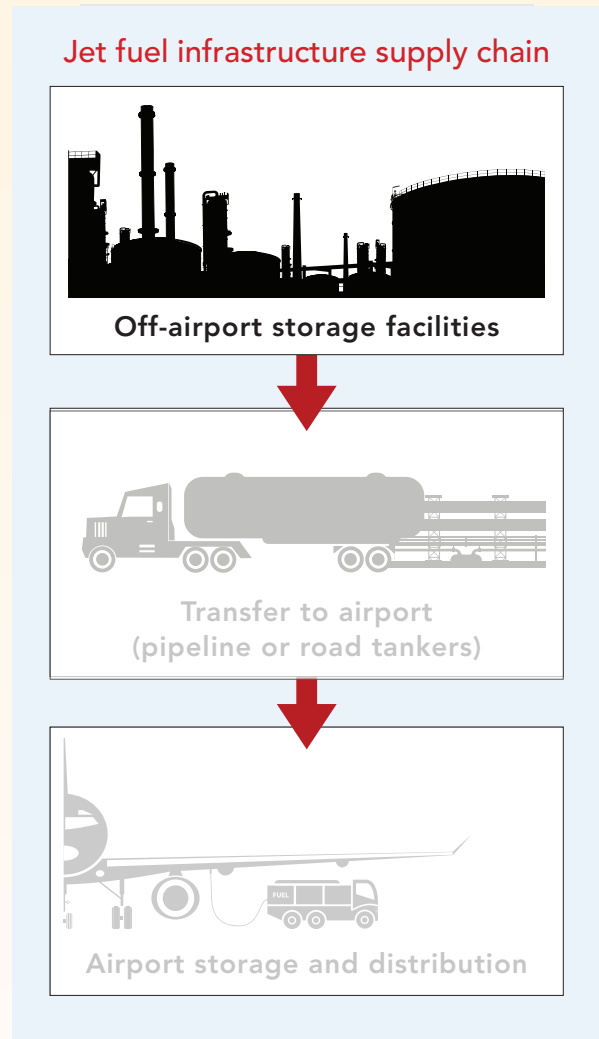


It does, however, ensure competitively-priced facilities are available if importers cannot negotiate access on commercially acceptable terms with existing facility owners. This strategic reform therefore greatly reduces the uncertainty and financial risk faced by jet fuel importers, facilitating their competitive entry into jet fuel markets.

BARA's member airlines are prepared to support the delivery and competitive pricing of off-airport storage facilities.

Should the cost of providing the facilities exceed the agreed competitive price, options for recouping the balance of costs include an increase in airfield charges levied by airport operators on airlines or a levy on fuel volumes.

BARA commits to discussing such funding arrangements with the airport operators in good faith, recognising that the airlines and airports are the primary beneficiaries of improved competition between jet fuel suppliers.



Competition in off-airport storage facilities

- Airport owners procure off-airport storage capacity
- Airport owners offer capacity at an agreed competitive price
- Airlines agree to support the funding of new off-airport storage facilities



STRATEGIC REFORM 2

Open access to jet fuel pipelines

The existing jet fuel pipelines are owned and controlled by either individual companies or joint ventures of companies that usually supply jet fuel to airlines at the airport.

There are no approved codes or arrangements that permit open access on fair and reasonable terms as allowed for under the *Competition and Consumer Act 2010* ('access undertakings'). This lack of open access prevents new entry into Australia's jet fuel industry.

BARA understands that the pipeline owners offer only limited or no access to competitors. There is no obligation on pipeline owners to allocate capacity based on the competitive outcomes between suppliers in winning jet fuel contracts with airlines.

BARA further considers that the process of 'auctioning' a pre-determined level of spare capacity is ineffective in fostering guaranteed pipeline access, and in turn, competition.

The competitive solution

One solution is for existing pipeline owners to establish access arrangements to their pipelines consistent with BARA's principles for workable access. In the first instance, the existing owners should be

given the opportunity to modernise access to their pipelines to support competitive jet fuel markets.

If agreement with the pipeline owners cannot be reached, however, it will be necessary to accelerate the construction and delivery of new pipelines. These accelerated pipelines should be owned and operated by companies that do not provide jet fuel to airlines.

When new pipelines are required to meet growth in demand, these pipelines should be independently owned and operated in accordance with BARA's principles for workable access.

BARA appreciates that accelerating the delivery of new pipelines will likely mean a period of pipeline capacity greater than that necessary to meet the jet fuel needs of the airlines. This, in turn, would likely mean the pipelines are not commercially viable on a 'stand-alone' basis to the infrastructure provider.

They would, however, be commercially viable from the perspective of BARA's member airlines, as the benefits of increased competition between jet fuel suppliers will greatly exceed the cost of the additional infrastructure. It is also in the public interest to deliver the infrastructure capacity necessary to enable effective competition between suppliers of jet fuel at Australia's major international airports.



As such, BARA's member airlines are prepared to financially support the competitive pricing of accelerated pipeline delivery. BARA commits to discussing possible funding arrangements, including an increase in airfield charges or a levy on all fuel volumes at the airport.

BARA's principles for workable access

Pipeline access should be based on the principles of flexible capacity allocation, published tariffs and efficient scheduling.

Flexible allocation

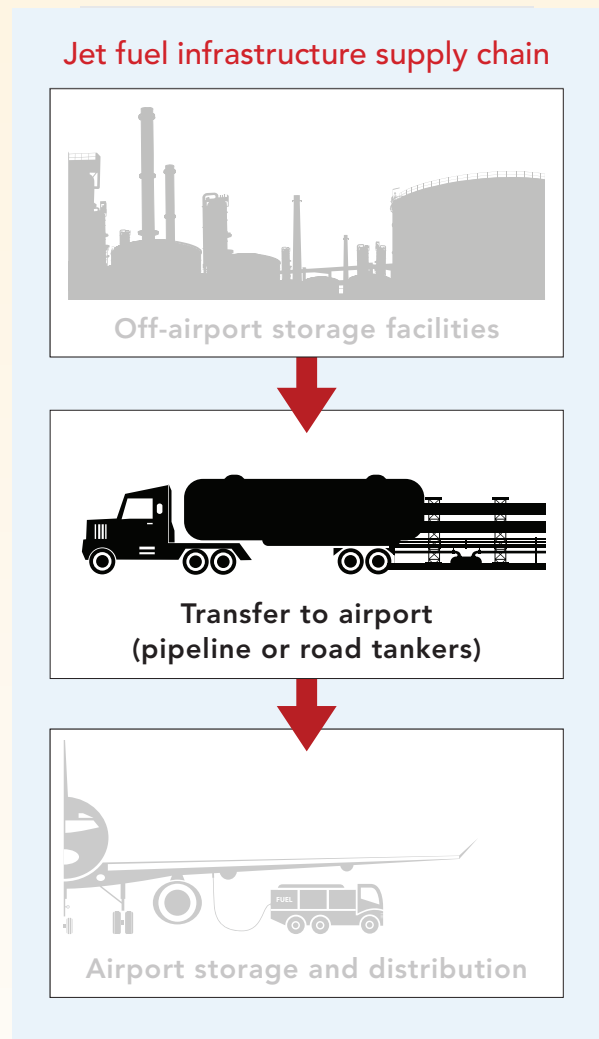
BARA envisages the flexible allocation of pipeline capacity based on the supply contracts won by jet fuel suppliers with airlines. This will require allocating available capacity on a regular basis and possibly, the ability of jet fuel suppliers to trade allocations to meet necessary demand.

Published tariffs

BARA proposes access pricing based on published tariff rates, providing pricing certainty to jet fuel suppliers. The tariff rate should reflect the competitive price of the service, set at a level to promote competitive jet fuel markets.

Efficient scheduling

The scheduling of jet fuel transfers through pipelines should be based on maximising the efficiency of the entire supply chain. BARA considers that efficient scheduling will be best coordinated by the operators of the on-airport storage and distribution facilities.



Competition in jet fuel pipelines

- Current owners invited to establish fair and transparent access arrangements
- If agreement cannot be reached, industry accelerates delivery of new pipeline infrastructure
- Airlines agree to support funding of accelerated delivery of new pipelines



STRATEGIC REFORM 3

On-airport storage and distribution facilities that enable a competitive and reliable supply of jet fuel

All jet fuel, whether locally produced or imported, is stored at each airport before being distributed to aircraft. Open and effective access to these facilities is therefore critical in supporting the achievement of BARA's vision for a competitive and reliable supply of jet fuel.

Currently, the on-airport facilities are largely owned by companies that supply jet fuel to airlines. The existing ownership and access arrangements represent a significant barrier to jet fuel importers. BARA is aware that potential new importers applied to become a 'participant' of on-airport facilities in Sydney some 28 months ago but none have obtained access.

Regardless of the reasons for the delay, such outcomes are unacceptable if a modern and competitive jet fuel industry is to emerge.

The competitive solution

The land on which the on-airport facilities are constructed at each airport is leased or licensed from the airport operators. Each airport operator has the ability to reform the on-airport facilities through the terms of future leases.

The new on-airport facilities arrangements must:

- provide open access to all recognised suppliers of jet fuel, with published tariff rates
- coordinate all jet fuel transfers from the off-airport storage facilities and refineries to the on-airport facilities
- plan and undertake key investments to facilitate the connection of new pipelines, efficient road tanker operations into the on-airport facilities and competitive into-plane services

Combined, these reforms would end the current legacy arrangements and position the on-airport facilities to become the 'cornerstone' of the new competitive jet fuel market.

By facilitating the delivery of future capacity, the on-airport facility operators can foster competition and ensure the long-term reliability of fuel supply.

There are independent operators of on-airport facilities that are keen to operate the infrastructure consistent with BARA's desired outcomes. At a number of international and regional airports around the world, these operators have offered transparency in price setting, delivered through continuous consultation with stakeholders.



Such operators would ensure the structural separation of fuel supply and provision of on-airport storage facilities. BARA sees substantial merit in the operation and pricing model proposed by independent operators.

BARA considers that if existing facility owners are not prepared to restructure their arrangements to promote competition, it is essential that such owners are replaced with independent operators who are willing to promote BARA's desired outcomes and support the emergence of competitive jet fuel markets.

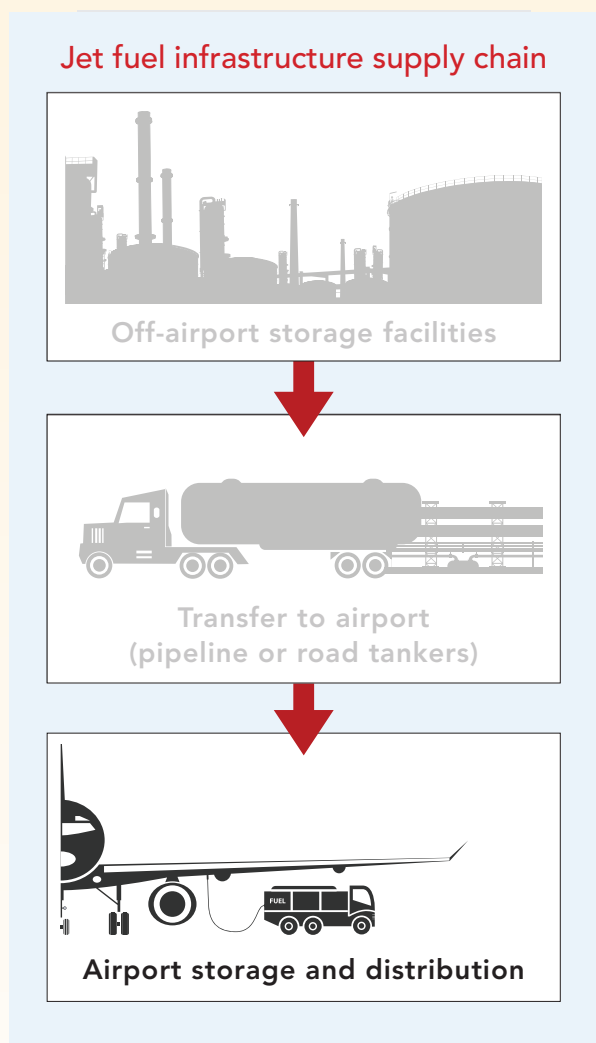
Sydney on-airport facilities – once in a generation opportunity

With the Sydney on-airport facilities lease due for renewal with Sydney Airport Corporation Limited (SACL) in the near future, there is a major forthcoming opportunity for BARA's proposed reformed jet fuel market model to be implemented at Australia's largest international airport.

BARA urges SACL to seize this valuable opportunity to optimise jet fuel infrastructure arrangements at Sydney Airport, in order to bring competition to the jet fuel supply market. If this opportunity is lost, it is foreseeable that competitors will be locked out of Sydney's jet fuel supply chain for at least a decade. By working with airlines and infrastructure providers, SACL can play a pivotal role in reforming Sydney's jet fuel supply market.

These reforms will deliver significant economic benefits to SACL through a more cost efficient international aviation industry, which is better placed to maintain and grow routes from overseas destinations to Sydney Airport.

BARA also urges the other airport operators to reform the on-site facilities at their airports, as the opportunity arises through future lease negotiations with the current owners.



Competition and the airport on-airport facilities

- Provide open access at agreed published tariffs
- Coordinate all jet fuel transfers to the on-airport facilities
- Plan and undertake key investments

Industry Led Reform

Australia's international airlines and the owners of the major international airports will need to take the decisive actions necessary to reform Australia's jet fuel infrastructure supply chains. By working together, the airlines and airports can facilitate a more efficient and competitive aviation industry, delivering long term benefits for both parties.

BARA extends the offer of cooperation and the exploration of funding options with airport operators as a basis for achieving its competitive reforms. In particular, BARA's member airlines are willing to support the funding of the new arrangements through airport charges or a levy on fuel volumes.

The reform path will need to be tailored to each airport's individual circumstances. Where capacity is constrained or no facilities are available, there is a paramount need to accelerate the delivery of new infrastructure. This could involve investments by airport owners or independent providers, underpinned by funding support from BARA's member airlines.

Bringing greater competition and innovation to Australia's jet fuel industry.

BARA expects that global fuel importers will also play an important role in implementing its reform path. Global importers bring a wealth of knowledge, experience and capability. These are the suppliers who will ultimately bring greater competition and innovation to Australia's jet fuel industry. The proposed reforms will allow all fuel suppliers, existing and potential, the opportunity to support the growth and commercial viability of Australia's international aviation industry.

The Australian Government

Reforming Australia's jet fuel infrastructure supply chains will be no easy task. But reform is in the national interest. More competition in the supply of jet fuel means a more robust international aviation industry, more jobs, more affordable airfares and lower air freight costs, more tourists to Australia and greater opportunities for Australians to travel overseas for business and leisure.

BARA seeks the support of all industry stakeholders. This requires collaboration and commitment by airports, jet fuel suppliers, infrastructure providers and government.

The delivery of new infrastructure will require support and approvals by government at all levels. Government can facilitate and streamline regulatory assessments and approvals necessary to deliver the additional capacity. This may be simply through governments ensuring 'red tape' and 'green tape' do not stymie the benefits of the strategic reforms to the industry and the economy.

At the strategic level, it is difficult to foresee all the challenges that will emerge in implementing BARA's reform path. Ongoing engagement with the Australian Government will be important to resolve regulatory and industry roadblocks to reform should they arise.

Through its role as the industry body representing international airlines, BARA looks forward to actively engaging with the Australian Government in relation to the development of a competitive supply of jet fuel at Australia's major airports, as part of promoting high quality, adaptive and efficient international aviation services in Australia.



BARA's Members

AIRCALIN

AIR CANADA

AIR INDIA

AIR MAURITIUS

AIR NEW ZEALAND

AIR VANUATU

ASIANA AIRLINES

CATHAY PACIFIC AIRWAYS

CHINA SOUTHERN AIRLINES

DELTA AIR LINES

ETIHAD AIRWAYS

EMIRATES

EVA AIR

FIJI AIRWAYS

GARUDA INDONESIA

JAPAN AIRLINES

KOREAN AIR

MALAYSIA AIRLINES

PHILIPPINE AIRLINES

QANTAS AIRWAYS

QATAR AIRWAYS

ROYAL BRUNEI AIRLINES

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