



**REGULATION IMPACT STATEMENT
FOR THE
AGREEMENT ON THE PROMOTION OF AVIATION SAFETY BETWEEN THE
GOVERNMENT OF AUSTRALIA AND THE GOVERNMENT OF THE UNITED
STATES OF AMERICA
AND FOR THE
IMPLEMENTATION PROCEDURES FOR AIRWORTHINESS COVERING
DESIGN APPROVAL, PRODUCTION ACTIVITIES, EXPORT AIRWORTHINESS
APPROVAL, POST DESIGN APPROVAL ACTIVITIES, AND TECHNICAL
ASSISTANCE BETWEEN AUTHORITIES**

INTRODUCTION

This document is a Regulation Impact Statement (RIS) for the proposed Bilateral Aviation Safety Agreement (BASA) between the United States of America (US) and Australia. This is called the Agreement on the Promotion of Aviation Safety between the Government of Australia and the Government of the United States of America. It will also form a basis for similar arrangements between Australia and other nations at treaty level or less than treaty level. The BASA is made up of two parts: an umbrella Agreement which is known as the Executive Agreement (EA) and a series of Implementation Procedures (IPs) on specific topics. Both the EA and all the IPs will be treaty level documents.

The EA provides the framework for developing the IPs which gives practical effect to the BASA. These procedures will establish binding working arrangements which allow for the mutual acceptance of certifications and approvals issued by the Civil Aviation Safety Authority (CASA) and the US Federal Aviation Administration (FAA). The EA is the culmination of negotiations between the US and Australia which have taken place over a number of years.

The Implementation Procedures for Airworthiness (IPA) is the first set of procedures negotiated under the BASA. It sets out the detailed technical processes which CASA and the FAA will undertake in certifying, approving and overseeing a range of airworthiness activities, including design and production of aeronautical products. This is of treaty status and is called the Implementation Procedures for Airworthiness covering design approval, production activities, export airworthiness approval, post design approval activities, and technical assistance between authorities.

The BASA establishes a mechanism through which the US will accept certifications and approvals issued by CASA, thereby reducing the need for duplication of processes in both States. Through existing regulations, CASA currently recognises FAA certification which is not reciprocated by the US. The BASA will significantly streamline procedures with a clear benefit to the Australian aviation industry.

ISSUE IDENTIFICATION

The Australian aerospace industry comprises aircraft component manufacturing, light aircraft manufacturing, aircraft repair and maintenance, systems design and engineering, aviation training and air traffic management products. The industry operates in both the civil and defence aerospace markets and is important for maintaining Australia's strategic defence capability.

Figures encompassing all areas of the aerospace industry are not currently available. However, the aircraft manufacturing sector's (as defined by the Australian New Zealand Standard Industry Classification (ANZSIC) 2824) contribution to exports is listed at **Table 1**.

Table 1- Total overall exports by value of Aircraft manufacturing (Standard ANZSIC 2824)

<i>EXPORTS</i> Aircraft Manufacturing	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05
Exports (\$ million)	656	708	1401	1364	778	801

Source: ABS Special DATA Service

In 2001, the sector was highlighted as a new and emerging market by the then Department of Industry, Science and Resources (now Department of Industry, Tourism and Resources (DITR)). Since then, the Australian Government has developed an *Aerospace Industry Action Agenda* (AIAA), through which the Commonwealth and State governments will work with industry to develop strategies to ensure the sustained development of Australia's aerospace capacity in the global market place.

The vision of the Australian aerospace industry is to:

'...develop and sustain world competitive capabilities in the Australian aerospace industry and increase annual exports five-fold to \$3.5 billion by 2012.' (*DITR website Sep 2005*)

The website also provides a link to the AIAA Report 2003. This report outlines a multi-year strategy that develops a vision for the Australian aerospace industry, achieved through the targeting of impediments to industry growth and opportunities to integrate Australian industry into the global supply chains of major aerospace programs. Implementation of the Action Agenda will strengthen Australia's competitive position in the fields of engineering design, advanced composite materials, and airframe structures. "Achieving the full benefit of these opportunities will depend upon industry and Government working together to implement the recommendations of this report and removing the barriers to growth, and the initiatives taken by industry itself" (*Chairman's Foreword AIAA Report 2003*).

The DITR website provides information on the outcomes of an Industry Scoping Workshop held on 19 September 2001. It identifies several areas that are believed to inhibit the growth and development of Australia's aviation industry.

As a number of Australian-based companies move towards Tier 1 supplier status in the global aerospace market, the requirement for such bilateral agreements will become more important. These companies need to be able to have their designs certificated under the Australian system and then accepted offshore in order to become a viable design and manufacturing business, based in Australia and serving the global market. Without such recognition, Australia will not be able to expand in this market which will inevitably result in lost opportunities and jobs for Australians and the stagnation of the Australian aerospace industry.

Current Arrangements

The current arrangements for the certification of Australian products overseas are repetitive, time consuming and costly.

As can be seen in **Table 2** the US is a significant trade partner for aircraft manufacturing products. As both Australia's largest market for aircraft products and largest point of origin for imported products, the restrictions on Australian products entering the US is believed to pose significant obstacles for the viability of Australian aviation design, manufacturing and maintenance businesses which have the potential to service the global market.

Table 2 – Value of 2004/2005 Aircraft Manufacturing Exports/Imports

Exports Top Ten Countries of Destination	2004/2005 Value \$M	Imports Top Ten Countries of Origin	2004/2005 Customs Value \$M
United States of America	377	United States of America	2104
France	80	France	1352
New Zealand	66	Canada	138
United Kingdom	59	United Kingdom	118
Singapore	44	Netherlands	29
South Africa	24	Germany	28
Canada	23	Australia (Re-imports)	21
Papua New Guinea	21	Singapore	20.4
Japan	12	Spain	20.2
Philippines	11	Switzerland	18

Source: ABS Special DATA Service

CASA regulators allow for the automatic acceptance of type certificates issued by the national airworthiness authorities of the following seven countries: Canada; New Zealand; France; the Netherlands; the United Kingdom; USA; and Germany. Due to Australia's "automatic acceptance" it is 'relatively' easy for Australian airlines and aircraft users to get CASA Type Acceptance Certificates for aircraft built overseas, but as only New Zealand has a reciprocal acceptance arrangement this process is effectively one way.

The current arrangement for Australian designed and produced products to be certified for import into other countries is a two-stage one. Initially, the manufacturer must get approval under the Australian system, which is from CASA, that the product satisfies Australian safety regulations and standards. Secondly, the manufacturer must then obtain recognition from the national airworthiness authority of the importing nation that the product satisfies their regulations and safety standards. This process repeats much of the work undertaken to get Australian approval and greatly increases the timeframes and costs involved in getting the product into the international market. Thus Australian-based companies are required to have their designs approved under the Australian system and then offshore increasing the costs incurred by the company. This dual process is standard around the world, unless there is some form of mutual recognition agreement in place which effectively recognises the Australian certification standards as being equivalent to those of the second country. The lack of such agreements has resulted, according to the AIAA, in a number of companies evaluating the alternative of moving offshore in order to qualify for US appraisal rather than Australian certification.

One example of the cost to a small aircraft manufacturer is that of an Australian owned and operated company designing and manufacturing light aircraft and components; repairing, maintaining and modifying aircraft; and designing and engineering systems. The company reported having spent AUD\$58,000 on CASA certification costs and over AUD\$160,000 to airworthiness

authorities abroad since 1993. These proposed set of Procedures will alleviate the need for the company to spend extra on certification of products exported to the US as CASA's certification of certain airworthiness products and designs will be accepted by the FAA.

The Problem

As the regulator in Australia, CASA is responsible for the certification of aircraft, civil aeronautical products, including the modification, repair and maintenance of those products to ensure they conform to Australia's Civil Aviation Regulations (CAR) 1988 and the Civil Aviation Safety Regulations (CASR) 1998, made under *the Civil Aviation Act 1988*. Presently, CASR Part 21.29A provides for the automatic acceptance of aircraft imported from a number of countries including: Canada; France; the Netherlands; Germany; New Zealand; United Kingdom; and the United States for the purposes of certification. The only reciprocal arrangement is with New Zealand. Australia's automatic acceptance of foreign aircraft has been very beneficial for Australian aircraft operators importing their aircraft from those countries. However, without reciprocity, there remains a major impediment for Australian manufacturers attempting to market their products overseas.

Often the Australian aerospace industry has to apply for separate recognition of their Australian certificated products in each country, adding time and cost factors which diminish the cost competitiveness of their products. It is necessary to remove or minimise the duplication of the certification process so that Australian certification of aerospace products may be accepted in countries to which Australian companies export. This can only be achieved within existing safety certification systems by the completion of bilateral agreements of mutual recognition.

Industry has stated that under a BASA, mutual recognition of each country's maintenance approvals would significantly enhance the Australian operators' abilities to sell aircraft to the US market and to perform aviation maintenance on US registered aircraft. Currently the US regulations, for example Federal Aviation Regulation (FAR) Part 145 (Repair Stations), requires a costly and time-consuming approval process for accreditation. While all standards are safety based, maintenance providers around the world find it difficult to obtain approvals and many perceive FAR Part 145 as a pseudo trade barrier.

One major airline company has stated that, in recent years, in order to sell aircraft to US customers, it has had to have all major local repairs over the aircraft's life reviewed and approved by a US authorised engineer. This can be the manufacturer or an independent authorised person who must be a US resident. This requirement is costly and time-consuming and can result in an increase to the cost of the sale of several million dollars. Alternatively, during the life of the aircraft, all major repairs, though CASA approved, have to be signed off by a US approved person or the manufacturer.

Another example is that FAA flight simulator qualification evaluations cost Australian operators who send pilots to the US for training, AUD\$20,000 per simulator type every two years. This is the approximate cost for sending a CASA Flight Operations Inspector to the US to carry out an inspection of the simulator and to issue the appropriate approval.

The AIAA, administered by DITR, recognises that the world aerospace industry is indisputably global, with players having to have both a global outlook and a competitive strategy in place to survive. Nations still recognise that having a national aerospace industrial capacity in situ is a vital component of a national technological and industrial base, but the economic realities are such that this must be met by being able to work and compete in a global industry.

The format of a BASA, based on the US model, consists of

- an enabling umbrella agreement, known as the Executive Agreement (EA)

- which is negotiated and signed at the foreign ministry level; and
 - which outlines the scope of the regulatory activities that may be undertaken for purposes of reciprocity, definitions and dispute settlement mechanisms.
- Appended to the Executive Agreement are Implementation Procedures (IPs). These IPs represent the substance of the BASA and are the detailed arrangements for each of the activities covered by the Agreement. For example, when considering agreement on aircraft certification an IP is developed to address specific safety areas such as design approvals, production activities, export airworthiness approval, post-design approval activities, and technical cooperation. The activities covered by a specific IP may include:
- airworthiness approvals of civil aeronautical products;
 - environmental approval and environmental testing;
 - approval and monitoring of maintenance facilities and maintenance personnel;
 - approval and monitoring of flight operations and airmen;
 - evaluation and qualification of flight simulators; and
 - approval and monitoring of aviation training establishments.
- The purpose of the IP is to define the civil aeronautical products, parts and appliances eligible for import into the US and Australia. The IP covers new and used aircraft, new aircraft engines, and new propellers. It will allow recognition by the FAA of Australian Type Certificates (TCs), amendments to TCs, and Supplemental Type Certificates (STCs) for aircraft designed and manufactured in Australia. Similarly it will continue recognition by CASA of US TCs, amendments to TCs, and STCs.
- The IP will allow recognition by the FAA of Australian Parts Manufacturer Approval (APMA) for Australian designed and manufactured aircraft and civil aeronautical products (which includes both aircraft engines and propellers). Discussions are under way to extend the coverage of the IP to include APMA for aircraft designed and manufactured outside Australia.

THE OBJECTIVES

The overall objective of the BASA and its associated IPs is to provide more efficient and effective safety regulations, and where applicable, remove technical regulatory barriers to trade in aviation products and services.

To this end, the proposed Australian-US BASA seeks to:

- promote aviation safety and environmental quality;
- recognise the emerging trend toward multinational design, production, and interchange of civil aeronautical products;
- enhance cooperation and increase efficiency in matters relating to civil aviation safety;
- consider the possible reduction of the economic burden imposed on the aviation industry and operators by redundant technical inspections, evaluations, and testing; and,
- recognise the mutual benefit of improved procedures for the reciprocal acceptance of airworthiness approvals, environmental testing, and development of reciprocal recognition procedures for approval and monitoring of flight simulators, aircraft maintenance facilities, maintenance personnel, airmen, and flight operations.

These are a generic set of ideals designed to encompass a number of areas of aviation safety. The generic nature of these objectives allows the individual nations, in this case Australia and the US, to negotiate the specific contents of the BASA, that is, each IP, to each country's satisfaction. In relation to the US and Australian BASA it was agreed that the first priority would be an IP on

airworthiness to address aircraft certification issues followed as second priority an IP for maintenance.

Australian Exports: Consistent with the Department of Foreign Affairs and Trade (DFAT) May 2003 report on 'Globalisation: keeping the Gains', the Government seeks to pursue new trade opportunities and greater access to overseas markets for Australian businesses. The Government is working to expand markets and address market barriers in a range of countries and places a high priority on consultation with business and the community, to ensure that the trade policy objectives developed by the Government sufficiently reflect the views, concerns and ambitions of the Australian public.

The Government places a high priority on the establishment of BASAs and other similar agreements. The successful negotiation of such agreements will achieve the objective of providing more efficient and effective safety regulation, and the removal of technical regulation impediments to trade particularly, in relation to aircraft certification and products in the first instance.

OPTIONS

Australia currently has a range of aviation agreements of various sorts with a number of nations. These take the form of Memoranda of Understanding, or Memoranda of Cooperation. Currently, in the area of aviation safety, Australia is a party to a single Bilateral Airworthiness Agreement (BAA). This Agreement, signed in 1975, between Australia and the US, covers the reciprocal acceptance of aircraft type certificates.

In 1996 the US first canvassed the idea of a two part BASA to replace their BAAs for aircraft airworthiness certification. This new type of treaty would provide for bilateral cooperation in a variety of areas including: aircraft certification; maintenance; flight operations; and environmental certification. This particular model is becoming common internationally, ensuring greater harmonisation of international aviation safety.

The Australian Government is seeking to improve export opportunities for aviation manufacturers by steadily negotiating bilateral arrangements relating to aircraft certification standards. This has now been given greater impetus by the government's acceptance of the AIAA, which sets out a strategy aimed at strengthening Australia's competitive position in the fields of engineering design, advanced composite materials and airframe structures. As part of this strategy, a high priority will be given to concluding negotiations with the national aviation safety authorities of key countries for recognition of aircraft design, manufacture, modification, repair and maintenance. CASA is to develop a dedicated Manufacturing Certification and New Technologies Office to better service the needs of the Australian aviation manufacturing industry. (*CASA Corporate Plan 2005/2006 to 2007/2008*)

ASSESSMENT OF IMPACTS

A BASA will remove impediments to Australian aviation/aerospace manufacturers gaining access to the US market due to the automatic acceptance of CASA certification by the FAA upon the agreement coming into force.

The aerospace manufacturing sector comprises a few large companies including Boeing Australia (which incorporates Hawker de Havilland), BAe Systems Australia, and EADS Australia Pacific. Lockheed Martin also has a significant presence in Australia. In addition there are several hundred small to medium enterprises spread over a wide range of specialist and technical businesses that are either independent or form part of the critical supply chain to the prime companies and assembly operations.

The industry is distributed across Australia's States and Territories as follows: NSW (31.7%), Victoria (15.3%), Queensland (31.0%), WA (11.3%), SA (5.7%), Northern Territory (3.0%), Tasmania (1.3%) and ACT (0.7%) (ABS Data ANZSIC Code 2824 – Aircraft Manufacture, 2003). Three states dominate the Australian Aerospace industry – NSW, Victoria and Queensland – between them accounting for 78% of the establishments.

Although data is not available to prepare a full economic analysis of impacts, as part of the consultation process all respondents supported the proposed BASA and several provided an indication of the level of change which could occur following agreement. Industry representatives pointed out that while the FAA does not charge for its assessment; all associated costs such as testing etc are being paid by the exporter.

One Australian light aircraft manufacturer has managed to attract substantial sales numbers in the global market for their Australian designed product in spite of these many difficulties. As an example of the positive economic impact of success in the aviation sector, this particular company increased their workforce from 50 to 200 over a 12 –18 month period from 2002 to 2004. Given that the company is situated in a rural area with relatively high levels of unemployment this increase was very significant. This company reported that it had paid over AUD\$160,000 to airworthiness authorities abroad since 1993, and given that 45% of its advance orders are to North America, a substantial part of this cost could have been saved if a BASA had already been in place.

Although it is quite difficult to provide an industry wide effect model, the example above is compelling. Similarly, the ability of Australian industry to undertake large scale and continuing maintenance of wide bodied transport aircraft is well known. The removal of present barriers to the expansion of this area of the aerospace industry has the potential for very substantial economic advantages.

Mutual recognition of each country's maintenance approvals would significantly enhance Australian operators' abilities to perform aviation maintenance on US registered aircraft. Presently the US regulations require an expensive and time-consuming approval process for maintenance accreditation. If this barrier were removed Australian facilities would be able to attract significantly more maintenance volume from the US to Australia. One major Australian provider of aircraft maintenance has stated that it would not be unreasonable to assume that maintenance revenue could increase by 50% under the proposed agreement.

Pilot bodies comment that recognition of Australian flight crew qualifications will assist those Australian pilots, and/or Australian professional pilot licence holders to gain employment with operators in many parts of the world who operate "N" registered aircraft. They state that the recognition would also be of invaluable assistance for the local operation of US aircraft on short-term lease.

"Approval of flight operations" will save excessive duplication of inspections (auditing) for Australian operators wishing to operate code-sharing agreements with American operators. Similarly, access to many overseas contracts including United Nations contracts would be facilitated by the agreement.

One Australian manufacturer, an exporter of aircraft components with annual sales over \$300 million, has stated: “Our customers wish to source to suppliers with certification capability. Certification overseas adds costs and in some cases requires regulation changes to make this possible. This results in Australian companies being uncompetitive with US companies thereby placing current business at risk as well as limiting new business opportunities. Potential revenue for existing and new contracts over the next 5 to 10 years is approximately \$500 million per annum provided the BASA is executed.”

It further states that its “contribution to the annual export value to the US is approximately \$190 million per annum and although moderate growth is predicted of around 10% p.a., under the current arrangements projects have been identified that would provide growth at 2 to 3 times this rate if the proposed level of mutual recognition were achieved.”

Indications were that relevant small businesses anticipated savings in certification costs allied with opportunities for increased markets.

CONSULTATION

A total of approximately 190 sets of the documents (BASA Discussion Paper, Draft Agreement and Synopsis of the Implementation Procedures) were distributed, both in response to requests and to targeted individuals, agencies, manufacturers and organisations. The receiving audience covered aircraft and aviation parts manufacturers, aviation maintenance and service industries, relevant associations, airlines, Commonwealth and State Departments and Agencies. A notice in *The Weekend Australian* (3-4 August 2002) drew attention to the proposed agreement, giving the department’s web site, where all details were available, and providing contact details.

The submissions demonstrated very strong support for the proposed BASA. Of the 32 submissions received, all expressed firm support for the agreement, stressing the expectation of not only cost savings but also anticipated strong growth for industry in Australia.

No respondent opposed the proposed agreement although two commented that existing obligations entered into by the US Government should be protected. It is concluded, from the submissions received, that only positive impacts on business could be anticipated.

CONCLUSION AND RECOMMENDED OPTION

A BASA would have the potential to greatly benefit Australia by promoting aviation safety as well as the manufacture and export of Australian aeronautical products and services.

Despite Australia’s emerging capacity to develop and produce world class aerospace technologies and products, the aerospace industry is facing significant challenges in its position in the global market.

The BASA appreciates Australia’s potential in the global market and is aligned with the AIAA. The Action Agenda’s vision incorporating ‘...the basis for a framework to overcome impediments

and realize the competitive growth potential of nominated sectors'; and the vision of the Australian aerospace industry to '...develop and sustain world competitive capabilities in the Australian aerospace industry and increase annual exports five-fold to \$3.5 billion by 2012'. The BASA will provide a means of realizing these ambitious visions.

Australia is now pursuing the negotiation of BASAs, or, in some circumstances less than treaty level agreements, with some of its significant trading partner nations. According to CASA's Corporate Plan 2005-06 to 2007-08 agreements are currently being sought with the USA, China, Brazil, Canada and the countries represented by the European Aviation Safety Agency. It is likely that the scope of the agreement signed with different nations will be similar, but the content of each Agreement may have significant variations depending on the items which Australia and the second nation may wish to include and the assessment of each nation's safety standards

A formal invitation for Australia to enter into treaty negotiations was received from the US Department of State on 14 December 2001. After consideration by the Hon John Anderson MP, the former Deputy Prime Minister and Minister for Transport and Regional Services, permission to commence BASA negotiations was given on 5 February 2002.

IMPLEMENTATION AND REVIEW

The EA of the BASA was negotiated on behalf of the US by the FAA, in consultation with the Department of State, and on behalf of the Government of Australia by the Department of Transport and Regional Services (DOTARS), in consultation with the Department of Foreign Affairs and Trade (DFAT), Office of International Law (OIL) and CASA. The IPA of the BASA was negotiated on behalf of the US by the FAA and on behalf of the Government of Australia by CASA, in consultation with DOTARS, DFAT and OIL.

The EA was signed in Canberra on 21 June 2005 by the Hon John Anderson MP, the former Deputy Prime Minister and Minister for Transport and Regional Services and Mr William A. Stanton, the US Chargé d'Affaires ad interim. The IPA was signed on 26 September 2005 by the Hon Warren Truss, Minister for Transport and Regional Services and Ms Nancy Graham, the FAA Regional Director for Asia and Pacific region.

The IPA is the first set of procedures negotiated under the BASA. It sets out the detailed technical processes which CASA and the FAA will undertake in certifying, approving and overseeing a range of airworthiness activities, including design and production of civil aeronautical products.

Both the EA and all the IPs will be treaty level documents. The IPA, after agreement, will not be a fixed document. It will be able, under the terms of the EA, to be modified and extended after consultation between the agencies. A further RIS will be prepared should major changes make this a requirement.

The Department, as the relevant portfolio Ministry, in conjunction with CASA, will monitor the BASA. Two years after the BASA comes into force, the Department proposes to review its impact on industry through consultation as appropriate with the Aerospace Industry Action Agenda Joint Steering Committee which has been appointed to drive the implementation of the AIAA.

Aviation Operations
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