

Introduction

Issues pertinent to commercial air transport for the carriage of passengers in remote areas of Australia are complex and are not able to be fully addressed by the aviation safety regulator CASA in isolation from government policy. CASA often finds itself in a position of attempting to address real safety issues which it is unable to resolve satisfactorily by imposition of safety rules alone because those problems are often related to Government policy. In this brief, reference to Government policy refers to the relevant aviation policy applicable to Federal, State and Territory Governments.

Background

Australia is one of the most urbanised countries on earth even by the standards of the very developed countries that by their nature tend to become urbanised. It is not clear whether Government policy wishes this urbanisation to intensify to the extent that remote Australia is all but ignored and left to sink or swim by its own efforts.

There appear to be mixed signals from Government which are particularly relevant to civil aviation and the rules that govern that aviation.

On the one hand we have a policy of user pays, which seems to be applied quite rigorously to aviation no matter where it operates, alleviated a little by the Rural Air Subsidy Service (RASS) scheme. User pays policy makes it almost impossible to provide practical or affordable air transport services in remote areas of Australia.

On the other hand we see massive subsidy to support rural and remote telecommunications, road and rail infrastructure and the provision of such essential services as medical support and educational facilities.

At issue is whether the Government wishes to have and support a remote community and if so how it considers the economic and military benefits of such a community and its supporting infrastructure relevant to modern Australia.

CASA is developing new aviation legislation in the form of Civil Aviation Safety Regulations (CASR). One part of the CASR, Part 121B, deals particularly with the operation of small aeroplanes, that is those of 5,700 kg or less, conducting passenger transport operations. These operations are conducted almost exclusively in the remote areas of the country because of the very low population density of these areas and therefore the impracticability of using larger more efficient aeroplanes. Thus Part 121B needs to revolve closely around clearly defined Government policy pertinent to remote Australia. Such a clear policy does not appear to exist and without it CASA will find it next to impossible to develop practical safety rules which can enable commercial air transport to be viable in the remote areas.

This brief attempts to raise some particular issues which have a direct bearing on Government rural and remote area policy and its influence on CASR Part 121B.

Subsidy or No Subsidy

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The rural road and rail infrastructure in the form of roads and railway lines are heavily subsidised by the urban population. This subsidisation makes the provision of rail and road transport in remote Australia feasible and it is inconceivable that it should be otherwise. However both road and rail transport are unable to provide short time interval travel over long distances and so are not practical for the provision of time sensitive services such as specialised medical support or the transport of highly perishable products. Nor is road or rail transport suitable for moving people over long distances or to and from remote communities. Road and rail transport are also often hostage to extreme weather conditions like floods or extensive bush fires.

The issue for Government is to decide whether it wishes to provide the option of air transport to rural communities or not. If they decide that they do, then the next question will need to be does the Government want this air transport to be practically affordable by the community and so represent a viable transport option. Should the Government support a viable air transport option then, like the road and rail option it must consider some level of subsidy.

The big questions are what is the appropriate level of subsidy, and how should it be applied?

Before those issues are covered the issue of general rural infrastructure requirements should be considered. If it is considered that the rural and remote areas of Australia require some level of population then it follows that some level of infrastructure must be in place to support that population. That level of infrastructure is a wholly Government decision as is the level of subsidised support that infrastructure receives. Upon those decisions hinge whether a community expands or contracts. It is for Governments to decide whether that expansion or contraction is desirable or not and thus whether it should reconsider its level of subsidised assistance. The major infrastructure capital cost items are roads, railway lines, telecommunications and aerodromes. Other infrastructure requirements revolve around the control and use of those major facilities.

The level of subsidy that government should provide should be directly related to the relative importance the Government places on each transport option. If it decides that air transport is not needed in a particular location, or indeed generally, then it may follow that it would provide no subsidy for air transport. The subsidy to all transport options should be similarly considered and clear decisions made, upon which communities can then make their own arrangements.

As CASA understands it the Government does believe that rural communities should have access to air transport but that such services should be user pays to a very large

extent. This means that to all intents and purposes air transport is unable to compete with either of the other two alternatives of road and rail for economic reasons and is therefore not viable and so not provided.

No amount of alleviation of CASA safety requirements can have any influence on such an outcome because safety costs represent a very small proportion of the overall cost of providing a service.

The provision of flight operations in rural and remote areas is considerably more expensive than in metropolitan areas for the following reasons:

- Small aeroplanes have much higher seat mile costs than large aeroplanes;
- Capital costs of providing the service are amortised across few people;
- Costs of maintenance support for the operation are higher due to higher transport costs;
- The difficulty and therefore cost of attracting qualified personnel;
- Air traffic control costs are high for little useful service;
- A serious lack of qualified personnel at outlying destinations to maintain the aerodrome or provide reliable information about aerodrome serviceability;
- The relatively high cost of regulatory oversight because of high travel costs, and travel time considerations;
- Increased ticket cost based on the tyranny of distance.

For aviation to have any chance of competing with surface transport all of these issues need to be addressed by some form of Government subsidy.

The other issue is how that subsidy should be applied. For road and rail transport the major capital cost is the cost of providing the very expensive ribbon of road or rail. For roads in particular the standard of the road must be such as to accommodate the largest vehicle likely to use it. Thus roads must be designed to carry heavy transport trucks rather than the family saloon. In road and rail transport systems the majority of the cost of providing the system is covered by government subsidy in the provision of roads and railway lines.

Aviation is different. The major cost is not in providing the aerodromes. As an overall proportion of the total cost aerodromes represent a very small proportion of the total cost. Overwhelmingly the largest cost in aviation is the provision of an appropriate aeroplane. A new nine seat piston twin engine aeroplane is likely to cost upwards of \$1,500,000 assuming such an aeroplane is being built. The safer turbine powered alternative aeroplane can cost between \$2,500,00 and \$5,000,000.

It follows that if subsidy is to be applied to the aviation sector of remote area transportation then to make the playing field level some form of assistance must be provided towards the capital cost of the aeroplane because it represents the lion's share of the total cost of the aviation transport system.

Resurrecting a Clapped Out System

Aeroplanes currently employed on domestic services by Qantas and Virgin are almost new, between 2 and 8 years old. Quality airlines attempt to keep their fleet age at below 10 years on average. The overwhelming majority of aeroplanes serving remote locations are between 30 and 40 years old!

As subsidies have been cut to rural air services over the last 30 years or so, operators, most of which are small and operating in a cut throat environment, have kept their costs to the passenger artificially low by not considering the cost of eventually replacing their existing fleets. Thus they are still using aeroplanes like the Piper Chieftain, or a Cessna 400 class of aeroplane, built up to 40 years ago and currently costing around \$300,000. Those same aeroplanes if bought new today, as indicated above, would cost in excess of \$1,500,000. It is clear to see that replacement of existing very tired aeroplanes would place an enormous strain on the cost structure of any remote air transport operator, and on ticket costs which already are much more expensive than main line air fares.

Piston engine powered aeroplanes almost certainly are approaching the end of the line. Piston engine aeroplanes require aviation gasoline, similar but not the same as the petrol used in cars. However these engines are not designed to use lead free fuel and it would be prohibitively expensive to change them. It is estimated that the world consumption of aviation gasoline is so small that it can be provided by only one refinery. This is not a practical proposition. The consumption of such fuel in Australia is relatively minute and therefore almost uneconomic to produce 'in house'. It must be expected that commercial production of such fuel could cease at short notice without considerable assistance from Government.

Most modern aeroplanes, even small aeroplanes, are powered by gas turbine engines which use aviation turbine fuel, similar to kerosene. Future piston engine design seems to be heading towards the diesel option which will also run on aviation turbine fuel. It may not be too alarmist to suggest that in the near future almost all aeroplanes used for rural and remote services will become obsolete and unusable because the fuel they require will not be available.

The cost of buying a gas turbine aeroplane to replace the majority piston engine aeroplanes serving the rural and remote areas will, as already stated, be about \$2,5000.000 to \$5,000,000. This is going to have an enormous effect on costs, costs which we have already seen are far higher than those for equivalent mainline services, and which have not been considered in past business plans. It would seem that without considerable government subsidy such aeroplanes could not be afforded and rural air services will cease, no matter what CASA does by way of making safety related rules.

Subsidy and Safety

As indicated above new turbine powered aeroplanes, and indeed new piston engine aeroplanes are going to cost the potential operator between 3 and 12 times more than a 30 to 40 year old aeroplane of similar size. In an operating environment where cost is the major or only consideration it is obvious that the old aeroplanes are going to be used until it is physically impossible to continue using them.

How does this influence safety? The simple answer can be provided by asking how many of us drive a 30-year-old car, or would consider travelling in a 30-year old taxi? Since those aeroplanes and cars were made there have been many innovations which have a significant influence on safety. Cars now have ABS brakes, air bags, efficient windscreen wipers and demist systems, better crashworthiness design, and many other innovations which make the family car a far safer mode of transport than it was 30 years ago. The casualty rates then and now provide ample evidence of the safety benefits of new design. Aeroplanes have similarly vastly improved over those years. It is conservatively estimated that a modern turbine powered aeroplane is more than 4 times safer than similar 30-year old piston types.

While cost is the only driver in decisions about what aeroplane one is offered to fly in remote areas, the safety benefits of new equipment will never eventuate and accident rates will stay much as they are. Rules alone cannot achieve or guarantee safety.

For remote area services to remain viable into the future, aeroplane replacement costs which influence ticket costs must be considered. At present they are not, which is ensuring the continued use of old aeroplanes and is only delaying the day that reality must break through. When it does the shock will enormous and can only become greater the longer reality takes in breaking through. If ticket costs continue to be driven by aeroplane replacement costs because of a user pays policy which disallows subsidy it is unlikely that remote area services will ever be viable.

Ongoing operating costs for new aeroplanes are probably considerably cheaper than those for the older types and the differential will increase with time but these benefits cannot be achieved while capital replacement costs remain so enormous thus ensuring remote area air services remain at their generally third world standard.

What Can Government Do?

It is recommended that the Government consider the following:

- Just as roads and railway lines are regarded as strategic assets consider aerodromes in a similar light. Thus aerodromes which service areas the Government require to be serviced should be provided with some measure of financial support. This support would remove any likelihood of the user pays costs for aerodromes being carried by the small airlines and so make air travel more affordable.
- Aerodromes will need to be appropriate for the intended aeroplanes, in many cases at present remote location aerodrome runways are too short for safe operations, and aeroplanes are operating without accepted safety margins.
- Consider financial and other support to remote communities to enable them to provide the minimum skilled manpower to ensure well-maintained aeroplanes and serviceable aerodromes.

• Provide 'soft' loans, or accelerated capital write off provisions, to airline companies who provide the air transport services so that they can afford to buy modern aeroplanes suitable for their intended use.

- Consider some form of ticket price subsidy which together with the 'soft' loans could assist in overcoming the added cost of aviation in remote areas.
- Consider contracting specific operators to conduct all marginally viable services, in other words provide for a regulated service provider along the lines of RASS. This is necessary because unrestrained free enterprise operations in such circumstances places an unsupportable burden on the safety regulator to ensure that safety requirements are met by all the operators. Without adequate and comprehensive oversight by the regulator, rogue operators undercut honest operators and so drive down safety to unacceptable levels. In the end even the rogue operators fail leaving nothing in place but large costs to reinstate the service.
- Consider whether in the interest of economy of scale it may be desirable to contract a few large operators to provide the majority of the rural and remote air services, rather than rely on many small operators. Further research is recommended in relation to this issue.

Recommendations

It is recommended that the House of representatives Standing Committee on Transport and Regional Services consider the above.

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Attached Material:

Extracts from short paper to CASA senior management, Points to Ponder - RASS, Associated Aerodromes and Other Subjects

ATTACHMENT TO SUBMISSION NO. 6 - CONFIDENTIAL