



**Twenty Second Meeting of the
Informal South Pacific ATS Co-ordinating Group (ISPACG/22)**

Papeete, Tahiti, 12-14 March 2008

Agenda Item 4 – Review Open Action Items AI 17.2

Japan to New Zealand UPR's - the results so far.

Presented by Air New Zealand Ltd

SUMMARY

This is a copy of a paper presented to IPACG 27 in Tokyo. The paper provides information on the results achieved by Air New Zealand whilst operating User Preferred Routes between Japan and New Zealand.

1. INTRODUCTION

- 1.1. On September 03, 2007, Air New Zealand flight NZ99 flew our first operational User Preferred Route (UPR). This was the culmination of nearly 12 months work by the Federal Aviation Administration Oakland, the Japanese Civil Aviation Bureau, Airways Corporation of New Zealand, Air Services Australia, Nadi ACC, PNG, Air Calin and Air New Zealand.

2. DISCUSSION

- 2.1 Since that first flight nearly all of Air New Zealand's flights to and from Tokyo Narita and the majority of flights to and from Osaka Kansai have been operated on UPR's. We have also operated on UPR's for a portion of most of the flights to and from Shanghai.
- 2.2 A paper study completed by Air New Zealand in September 2006, and reported to IPACG/26 by the FAA suggested that unrestricted UPR's could result in annual fuel burn savings of approximately 1,720,000 kgs.
- 2.3 The initial implementation has a number of restrictions imposed by various ANSPs including:
- a) Within the Fukuoka CTA:
Aircraft may file a UPR random route east of ATS route A337 and must join an ATS route by 30 North latitude (waypoints NOGAK, UPDOB, KAKNI)

- b) Within the Oakland CTA:
Aircraft transiting through Guam CERAP must file reporting points on the Guam/Oakland boundary.
- c) Within the Guam CTA:
Aircraft transiting through Guam CERAP must file on published ATS routes.
- d) Within the Port Moresby CTA.
Aircraft may file UPR routings on or east of ATS route G205.

2.4 It is very pleasing to report that even with these restrictions we are saving an average of 616 kg of fuel burn/flight which when extrapolated over twelve months equates to an annual saving of approximately 770,000 kg for our Japanese flights and 320,000 kg for our Shanghai flights. A total annual saving in fuel burn of 1,090,000 kg or, if we use IATA's figures for emissions, 3,444,400 kg less CO₂ emissions.

3. IMPACT OF ANSP RESTRICTIONS

- 3.1 The Guam CTA restriction requiring aircraft to file on published airways through the Guam CERAP results in a significant reduction in the volume of airspace within which a UPR can be operated as it funnels aircraft onto the airways structure at a much earlier stage than might otherwise be required. Air New Zealand is currently studying the impact of this restriction and we estimate that if we could operate unrestricted UPRs through Guam's airspace that we could save an additional 250,000 kg of fuel burn per year.
- 3.2 Due to the Guam restriction Air New Zealand is unable to estimate the impact of the Fukuoka CTA restriction which requires us to file on published ATS routes if operating on or west of ATS route A337, however it would seem reasonable to suggest that if the Guam restriction was removed then this restriction would also have a significant impact.

4. ACTION BY THE MEETING

- 4.1 The meeting is invited to:
 - a) Note the successful implementation of these UPRs and the significant fuel savings and reduced environmental impact achieved. Air New Zealand thanks all the ANSPs involved for ensuring that these UPRs have progressed this far.
 - b) Note that commitments were given by JCAB and FAA, at IPACG 27, to consider the impact of the promulgated restrictions on UPR operations and endeavour to modify these restrictions where operationally possible.