

## **CONFERENCE ON THE ECONOMICS OF AIRPORTS AND AIR NAVIGATION SERVICES**

(Montreal, 19 - 28 June 2000)

Agenda item 5: **ICAO policy**  
Agenda item 5.2: **Elements for consideration with regard to ICAO policy**

### **APPLICATION OF ADVANCED ECONOMIC PRINCIPLES IN SETTING AIRPORT AND AIR NAVIGATION SERVICES CHARGES**

(Presented by the Secretariat)

#### **SUMMARY**

This paper focuses on the application of advanced economic principles in setting airport and air navigation services charges; presents the guidance material on the subject added to the *Manual on Air Navigation Services Economics* (Doc 9161/3) and the *Airport Economics Manual* (Doc 9562); and proposes text on the subject for inclusion in the *Statements by the Council to Contracting States on Charges for Airports and Air Navigation Services* (Doc 9082)\*. Suggested action by the Conference is at paragraph 6.1.

#### **1. Background**

1.1 At the 1991 Conference on Airport and Route Facility Management (CARFM) a proposal to amend the *Statements by the Council to Contracting States on Charges for Airports and Air Navigation Services* (Doc 9082) to allow for the application of marginal cost pricing in setting charges, was rejected. The application of marginal pricing and other advanced principles was subsequently addressed by the Air Navigation Services Economics Panel (ANSEP) in conjunction with a proposal to include text to that effect in the *Manual on Air Navigation Services Economics* (Doc 9161/3). That proposal was not found acceptable by the Panel, an important reason being that marginal pricing might not be in conformity with the equity principles in Article 15 of the *Convention on International Civil Aviation*. The Panel recommended,

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\*Proposed by the Secretariat in ANSCConf-WP/4 to be retitled *ICAO Policies and Charges for Airports and Air Navigation Services*.

however, and the Air Transport Committee and Council agreed, that the issue should be subject to a separate study.

1.2 The following were the terms of reference for the study:

- a) to develop guidance on the application of additional economic principles including marginal pricing which is compatible with Article 15 of the *Convention on International Civil Aviation*;
- b) to elaborate on such guidance in the form of text for inclusion in the *Manual on Air Navigation Services Economics* and the *Airport Economics Manual*; and
- c) to propose, if required, associated amendments to the *Statements by the Council to Contracting States on Charges for Airports and Air Navigation Services* aimed at ensuring compatibility without diminishing the authority of the *Statements*.

Items a) and b) of the terms of reference were assigned to a Secretariat Study Group while the Secretariat alone was to carry out the task envisaged under item c).

## 2. Conduct of study

2.1 The Secretariat Study Group was established early in 1999 and finalized its work later that year. The Group was composed of members from six Contracting States and three international organizations.

## 3. Main conclusions of the study

3.1 The Study Group considered whether the application of economic principles would be compatible with Article 15 of the Convention on International Civil Aviation and the policy guidance in the *Council Statements* (Doc 9082/5) and concluded that it would. In fact the concept of applying economic principles was already covered to a certain extent in both the *Manual on Air Navigation Services Economics* (Doc 9161/3) and the *Airport Economics Manual* (Doc 9562).

3.2 However, difficulties could be faced in applying a marginal pricing approach since the calculation of marginal costs was complex. It was considered that the application of that approach should remain optional with likely application only in States where airspace congestion was being experienced. Monopoly aspects of infrastructure provision should also be borne in mind. The Group concluded that the application of a marginal pricing approach may be subject to a high degree of uncertainty and should be undertaken with caution.

3.3 The Group proposed the texts shown in the Appendix which were subsequently distributed for inclusion respectively in the *Manual of Air Navigation Services Economics* (Doc 9161/3) and the *Airport Economics Manual* (Doc 9562).

## 4. Other relevant aspects

4.1 The economic principle of charges being based on the costs of providing the facilities and services concerned is a fundamental principle underlying ICAO cost recovery policy. The interest expressed in applying other economic principles such as marginal pricing often stems from the objective of encouraging traffic to move from congested peaking hours to periods of less or no congestion. Application of marginal

pricing would mean that to the traffic constituting the additional volume above the regular flow would be allocated the additional costs of serving that additional traffic. Thereby different users would be subject to different charges, which would contravene Article 15 of the Chicago Convention.

4.2 Another approach taken by some airports to deal with traffic peaks has been to levy peak charges, which apply equally to all traffic moving during peak hours and are thus in conformity with Article 15 of the Chicago Convention. Peak charges, which are as a rule levied in the form of landing charges, differ from them in that they represent a higher level of charge. However, they are calculated in the same manner as landing charges, that is, they are generally based on aircraft weight. Peak charges may also be made up of a combination of a fixed element and a weight related element. But the same tariff applies to all the traffic when peak charges are levied. While the intent with peak charges was originally to reduce traffic peaks, this has generally not proven an effective means to that end because traffic demand has been shown to be fairly inelastic (user charges being a relatively small proportion of airline operating costs). However, peak charges have instead become a tool for airports experiencing traffic peaks to recover the additional costs of accommodating these peaks.

4.3 The application of peak charges is endorsed in the Council Statements in Doc 9082/5 with regard to airports in paragraph 17 (i) and, more indirectly, with regard to air navigation services in paragraph 41 (iii) (the subject of capacity management is addressed more fully in ANSCConf-WP/11). Application of advanced economic principles would require accounting and cost allocation expertise of a fairly advanced degree. Representations have been made by States outside Western Europe and North America to the effect that they find current ICAO cost accounting and cost allocation guidance difficult to implement and apply, and that the introduction in these circumstances of, for example, the application of marginal pricing into ICAO guidance would be counterproductive; instead these States have advised that attention should focus on promoting the application of the guidance that already exists.

4.4 Another issue that needs to be emphasized is the monopoly aspect of the provision of airports and air navigation services. In a competitive environment producers who experiment with the pricing pattern of the services they sell will usually experience prompt client response as clients negatively affected will abandon the producer concerned in favour of another whose prices are more competitive and vice versa. The clients of airports and air navigation services providers generally do not have that alternative. Consequently, application by airports or air navigation services providers of such advanced economic principles as marginal pricing may distort equity and lead to disequilibrium in parts of the air transport sector.

## **5. ICAO policy**

5.1 The fact that ICAO cost recovery policy is based on a fundamental economic principle does not preclude that the application of other economic principles may need to be reflected in Doc 9082. It is therefore suggested that text along the following lines be inserted in Doc 9082 (immediately after paragraphs 14 (i) and 34 (i) in the present Doc 9082/5):

“The costs should be determined on the basis of sound accounting principles and may reflect as required other economic principles provided these are in conformity with Article 15 of the *Convention on International Civil Aviation* and other principles in the present document”.

## **6. Action by the Conference**

6.1 The Conference is invited to note this paper and agree to recommend to the Council that the text along the lines proposed in paragraph 5.1 above be inserted in Doc 9082.

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## **APPENDIX**

### **TEXTS ADDED TO THE MANUAL ON AIR NAVIGATION SERVICES ECONOMICS (DOC 9161/3) AND AIRPORT ECONOMICS MANUAL (DOC 9562)**

- A. Text inserted in the *Manual on Air Navigation Services Economics* (Doc 9161/3) in Chapter 5 – Air Navigation Services Charges and their Collection, in Section A – Basic Factors Influencing Air Navigation Services Charges and Cost Recovery, immediately after paragraph 5.6:

“5.7 The application of economic principles to setting charges which are consistent with the Council Statements in Doc 9082/5 should emphasize the need to recover costs in an equitable manner from the users of navigational services. The approach to recovering costs, as defined in Chapter 4, stipulates that charges take into account the cost of providing air navigation services and the effectiveness of the services rendered (See also Council Statements in Doc 9082/5, paragraph 37 (v)). These principles are consistent with an economic approach to charging for air navigation services. Within an economic context charges should be set both to recover costs and to encourage the provision of additional capacity when necessary.

5.8 The aim of an economic approach to setting charges is to bring the demand for and the offer of air navigation services capacity into equilibrium. This could encourage the provision of additional capacity. The level of charges should be considered in performing the required investment appraisal (including cost/benefit analysis) to justify its provision in financial terms. An example of an economic approach would be to apply a two-part tariff with a fixed rate for “entry” into the system and a variable element to reflect the extent of the service rendered. In order to apply economic principles to setting charges it would be necessary to identify the costs associated with the air navigation services component(s) being charged for.”

- B. Text inserted in the *Airport Economics Manual* (Doc 9562) in Chapter 5 – Charges on Air Traffic and their Collection, in Section A – Basic Factors Influencing Charges on Air Traffic, immediately after paragraph 5.5:

“5.6 The application of economic principles to setting charges which are consistent with the Council Statements in Doc 9082/5 should emphasize the need to recover costs in an equitable manner from the users of airport services.”