



International Civil Aviation Organization

WORKING PAPER

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COMMITTEE ON AVIATION ENVIRONMENTAL PROTECTION (CAEP)

EIGHTH MEETING

Montréal, 1 to 12 February 2010

Agenda Item 2: Review of technical proposals relating to aircraft engine emissions

DEVELOPMENT OF AN AIRCRAFT CO₂ STANDARD

(Presented by ICCAIA)

SUMMARY

This paper draws the attention of CAEP/8 to the continued development of a CO₂ Standard for subsonic jet aircraft, as discussed in the scoping analysis of CAEP/8-WP/20.

After the last CAEP/8 WG3 meeting, ICCAIA continued to discuss the excellent CO₂ scoping study work as defined in CAEP/8-WP/20. ICCAIA further considered the need to define an MTOW threshold in order to focus the scope of a CO₂ Standard on the subsonic jet aircraft sub-category as appropriate, thereby simplifying and expediting the process for completion of the CO₂ Standard. As a result of these additional ICCAIA discussions, ICCAIA considers that a more inclusive approach to evaluate a metric and certification scheme for all subsonic jet aircraft is more likely to avoid future market distortion. It is therefore recommended that the scope of WG3 work for the CAEP/9 cycle include initial evaluation of a more inclusive approach in parallel with the consideration of the MTOW threshold recommended in CAEP/8-WP/20. Final recommendations on applicability could be made in support of a selected Steering Group meeting early in the CAEP/9 cycle. Such an approach will ensure due consideration is given to all categories of subsonic jet aircraft and will minimize unintended consequences. ICCAIA believes that leaving the threshold open now will not delay the agreeing of a Fuel Efficiency Metric in this coming CAEP cycle.

ICCAIA is committed to complete the necessary work within WG3 (CAEP/8 future work remits E09 and E10) to deliver the material that CAEP needs during the CAEP/9 cycle, even given the above recommendation to keep the applicability threshold open at this time. It should be further noted that limitations on the applicability of a new CO₂ Standard at any point should not be construed to limit the scope of the analysis nor participation in WG3.

Action by the CAEP is in paragraph 4.

1. INTRODUCTION

1.1 ICCAIA draws attention to the two options described in Paragraph 3.1.e) of CAEP/8-WP/20 as follows:

e) *Discussions on further focusing the scope of a Standard on a sub-category of the subsonic jet aircraft have identified two options for consideration in defining the future work item remit:*

i) A MTOW threshold of $\geq 50,000$ kg (110,231 lb).

ii) A MTOW threshold of $\geq 32,500$ kg (71,650 lb) and a maximum passenger seating capacity of ≥ 20 (freighter aircraft above 32,500kg would be included).

2. BACKGROUND

2.1 ICCAIA members have fuel efficiency metric development experience for larger commercial aircraft from previous CAEP cycles, and as a result, are acquainted with several difficult issues that will be encountered as the work moves forward. That said, it is important that a more inclusive approach to a new fuel efficiency metric and CO₂ Standard consider all sectors of the subsonic jet aircraft category. Any future applications of such a Standard will then have been based on a thorough technical review prior to implementation, including demonstration that the Standard is environmentally beneficial, economically reasonable and technically feasible and has considered the implications for all sectors.

2.2 It is essential that this technical review be based on the concept of “technological feasibility”, as approved by CAEP/7, particularly considering the differences existing between Standards and technological goals, as highlighted in CAEP/8-IP/40.

3. DISCUSSION

3.1 ICCAIA now has concerns with the proposed applicability threshold being defined prior to a full analysis within the CAEP process. The threshold for applicability proposed in CAEP/8-WP/20 might have unintended consequences that have not yet been thoroughly considered in the initial WG3 discussions. Within ICCAIA, two additional considerations have surfaced recently regarding ICCAIA’s view on an applicability threshold for a CO₂ Standard as follows:

- Concerns of some manufacturers who have products below and above any threshold in terms of unintended consequences.
- Regional jet aircraft manufacturers and business jet manufacturers desire to be involved in the CO₂ Standard setting process to reduce the possibility of unintended consequences for their products.

3.2 ICCAIA is pressing forward with development of a fuel efficiency metric that is appropriate for all subsonic jet aircraft and hence could be applied, if necessary, to any specific subset of the subsonic jet aircraft category. ICCAIA expects even greater participation of its membership within

WG3 during the CAEP/9 cycle and is fully committed to deliver the material that CAEP needs to set a CO₂ Standard.

3.3 Before making a final recommendation of an appropriate CO₂ Standard and efficiency metric, ICCAIA members, in conjunction with WG3, should fully explore the impacts of such recommendations in order to avoid unintended consequences of having one segment unduly burden another. This will ensure a robust metric and Standard is developed that has considered all subsonic jet aircraft.

3.4 ICCAIA therefore recommends WG3 consider additional studies and data with results provided to CAEP before CAEP makes a decision on an MTOW threshold option as requested in CAEP/8-WP/20 section 4.1c). Data from WG3 studies should be considered at the first and second steering group meeting during the CAEP/9 cycle.

4. ACTION BY THE CAEP

4.1 The CAEP is invited to:

- a) request WG3 to provide CAEP with appropriate applicability threshold studies and data as part of development of a CO₂ Standard and fuel efficiency metric; and
- b) consider the applicability weight thresholds found in CAEP/8-WP/20, section 3.1e) and any other further thoughts that WG3 provides on a threshold at the first and second steering group meeting of the CAEP/9 cycle.

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