

ATTACHMENT to State letter AN 1/17-09/093

**QUESTIONNAIRE CONCERNING VOLUNTARY ACTIVITY FOR GHG REDUCTION/MITIGATION  
IN THE AVIATION SECTOR**

A copy of the questionnaire, in Microsoft Word format, has been posted on the Internet at <http://www.icao.int/icao/en/env/measures.htm>.

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**Q1.** Name of the voluntary activity.

Commercial Aviation Alternative Fuels Initiative (CAAFI)
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**Q2.** Type<sup>1</sup> of the voluntary activity.

<input type="checkbox"/> Unilateral commitment <input checked="" type="checkbox"/> Public voluntary scheme <input type="checkbox"/> Negotiated agreement <input type="checkbox"/> Other (Please describe the activity in the box below.)
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CAAFI is a coalition of airlines, aircraft and engine manufacturers, energy producers, researchers, international participants and U.S. government agencies. Together these stakeholders are leading the development and deployment of alternative jet fuels for commercial aviation. CAAFI's goal is to promote the development of alternative jet fuel options that offer equivalent levels of safety and compare favorably on cost with petroleum based jet fuel, while also offering environmental improvement and security of energy supply for aviation.
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**Q3.** Please mark all the participants<sup>2</sup> of the activity.

<input checked="" type="checkbox"/> Airline <input checked="" type="checkbox"/> Airline association <input checked="" type="checkbox"/> Manufacturer <input checked="" type="checkbox"/> Manufacturer association <input checked="" type="checkbox"/> Airport authority <input type="checkbox"/> Air traffic control <input checked="" type="checkbox"/> Government <input checked="" type="checkbox"/> Other (Please specify in the box below.)
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Agriculture Industry, Alternative Fuels/Energy Industry, Academia
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**Q4.** Is the voluntary activity accompanied by a side agreement<sup>3</sup>?

<sup>1</sup>The features of each type of voluntary activity are as follows.

- Unilateral Commitment: The environmental improvement plan established by the participant itself, and declared to the stakeholders, such as employees, stockholders, consumers, etc. Target and measures to environmental improvement are established by the participant itself.
- Public Voluntary Scheme: The scheme which the participant agrees voluntarily with the standard on environmental improvement target, technology, management, etc. established by public organization such as Ministry for Environment.
- Negotiated Agreement: Contract based on negotiation between public organization (national government/local government) and industries. Both parties can independently decide whether to agree to the contract.

<sup>2</sup> If you marked "Public voluntary scheme" on Q2, the public organization which establishes the standard is included in the participants. If you marked "Negotiated agreement" on Q2, the public organization which agrees to the contract is included in the participants.

<sup>3</sup> "Side agreement" is the agreement between the participant of the activity and a third party. For example, the agreement between an airline and an engine manufacturer, which prescribes that the manufacturer assist the airline to attain its target by introducing new emission-reducing technologies, is considered as a side agreement. For more information, please refer

Yes (Proceed to Q4-1.)  No (Proceed to Q5.)

**Q4-1.** If the voluntary activity is accompanied by side agreement, please describe the parties and outline the side agreement.

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**Q5.** Please answer the following questions concerning the coverage of the voluntary activity:

**Q5-1.** Select all green house gases (GHGs) which are part of the voluntary activity.

Carbon dioxide (CO<sub>2</sub>)     Methane (CH<sub>4</sub>)     Nitrous oxide (N<sub>2</sub>O)     Hydrofluorocarbons (HFCs)  
 Perfluorocarbons (PFCs)     Sulphur hexafluoride (SF<sub>6</sub>)    Nitric oxide & Nitrogen dioxide (NO<sub>x</sub>)     Water vapor (H<sub>2</sub>O)     Other (Please specify in the next box.)

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**Q5-2.** Please select all operations<sup>4</sup> which are part of the voluntary activity.

International passenger flight     Domestic passenger flight     International cargo flight      
 Domestic cargo flight     Other (Please specify in the next box.)

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**Q6.** Please answer the following questions concerning the index to measure the effect of the voluntary activity.

**Q6-1.** Select the index used to measure the effect of the voluntary activity.

Absolute quantity of GHG emissions<sup>5</sup> (Please outline the index in the box below.)  
 Unit of GHG emissions<sup>6</sup> (Please outline the index in the box below.)  
 Introduction of specific technology  
 Introduction of specific procedure     Other (Please specify in the box below.)

CAAFI's goal is to promote the development of alternative jet fuel options that offer equivalent levels of safety and compare favorably on cost with petroleum based jet fuel, while also offering environmental improvement and security of energy supply for aviation.

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to Part II Paragraph 6.5.2 on "Template and Guidance on Voluntary Measures", released on ICAO CAEP website ([http://www.icao.int/icao/en/env/Caep\\_Template.pdf](http://www.icao.int/icao/en/env/Caep_Template.pdf)).

<sup>4</sup> In case that the voluntary activity describes its coverage from the other viewpoint than listed above, such as "operation under IFR", "operation of aircraft larger than specific weight", etc. and that aim of the activity is not linked to operation directly, for example introduction of new technology which contributes reduction/mitigation of GHGs, please mark "other" and please describe feature.

<sup>5</sup> The example of the unit is Ton-CO<sub>2</sub>, Ton-C, m<sup>3</sup>-CO<sub>2</sub>, etc.

<sup>6</sup> The example of the unit is g-CO<sub>2</sub>/RPK (Revenue Passenger Kilometer), g-CO<sub>2</sub>/ASK (Available Seat Kilometer), g-CO<sub>2</sub>/RTK (Revenue Ton Kilometer), g-CO<sub>2</sub>/ATK (Available Ton Kilometer), etc.

**Q6-2.** Please outline the procedure to acquire data to calculate or describe the index of Q6-1.

N/A
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**Q7.** Please answer the following questions concerning the target of the voluntary activity.

**Q7-1.** Is the target of the voluntary activity clearly defined?

<input type="checkbox"/> Yes (Proceed to Q7-2.) <input checked="" type="checkbox"/> No (Proceed to Q8.)
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**Q7-2.** Please describe the target of the voluntary activity, including substance of the target, target year, base year.

Target is broadly to facilitate development and deployment of alternative jet fuels for use by aviation. While individual participants may have targets with defined timeframes etc. CAAFI as a whole does not.
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**Q8.** Please list the measures to attain the target or to reduce/mitigate GHGs.

Introduction of sustainable alternative jet fuels into the fuel supply can reduce life cycle CO2 emissions and reduce air pollutants (primarily Particulate matter).
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**Q9.** Please answer the following questions concerning periodic review of the voluntary activity.

**Q9-1.** Is the progress of the voluntary activity reviewed periodically?

<input checked="" type="checkbox"/> Yes (Proceed to Q9-2.) <input type="checkbox"/> No (Proceed to Q10.)
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**Q9-2.** Please describe the frequency of the periodic review.

CAAFI holds bi-annual general meetings to update progress.

**Q9-3.** Is a third party's opinion considered/to be considered in the periodic review?

Yes (Proceed to Q9-4.)  No (Proceed to Q10.)

**Q9-4.** Please outline the third party opinion.

**Q10.** Please answer the following questions concerning legislative obligation.

**Q10-1.** Is there any legislative obligation on attainment of the target?

Yes (Proceed to Q10-2.)  No (Proceed to Q11.)

**Q10-2.** Please describe legislative obligation, including measures taken in case that the participant of the voluntary activity fails to attain the target.

**Q11.** Please answer the following questions concerning disclosure of information<sup>7</sup> on the voluntary activity:

**Q11-1.** Is the name of the participant of the voluntary activity disclosed to the public?

Yes  No

**Q11-2.** Is the target of the voluntary activity disclosed to the public? (If you marked "no" at Q7-1, the answer to this question shall be "not applicable".)

Yes  No  Not applicable

**Q11-3.** Are the measures taken/to be taken by the participant of the voluntary activity to attain the target/reduce or mitigate GHGs disclosed to the public?

Yes  No

**Q11-4.** Is the result of each periodic review disclosed/to be disclosed to the public? (If you marked "no" at Q9-1, the answer to this question shall be "not applicable".)

<sup>7</sup> Item(s) to which the answer is/are "no" from Q11-1 to Q11-5, are considered but this information will not be included in the final report.

Yes    No    Not applicable

**Q11-5.** Is the effect of the voluntary activity disclosed/to be disclosed to the public?

Yes    No

**Q12.** Please answer the following questions concerning effect of the voluntary activity:

**Q12-1.** Is third party's opinion considered/to be considered when examining the effect of the voluntary activity?

Yes (Proceed to Q12-2.)    No (Proceed to Q12-3.)

**Q12-2.** Please outline the third party opinion.

N/A

**Q12-3.** How much of GHGs amount emitted per year, in CO<sub>2</sub> weight equivalent are reduced or mitigated/expected to be reduced or mitigated by the voluntary activity?

Target is broadly to facilitate development and deployment of alternative jet fuels for use by aviation. While individual participants may have targets with defined timeframes etc. CAAFI as a whole does not.

**Q13.** Please provide the website address for the voluntary activity, if any, in the box below.

[www.caafi.org](http://www.caafi.org)

**Q14.** Please describe additional information, if any.