



**PERMANENT DELEGATION OF BRAZIL TO THE
INTERNATIONAL CIVIL AVIATION ORGANIZATION**

Letter No.: 042/ BRASICAO

Montreal, March 15, 2010

Mr. Raymond Benjamin
Secretary General of ICAO
Suite 12.15

Dear Mr. Secretary General,

Please find herewith attached the information requested with respect to State Letter reference AN 1/17-09/93, dated December 2, 2009, on the Collection of information on voluntary activity for greenhouse gas (GHG) reduction/mitigation in the aviation sector.

Please accept, Sir, the assurances of my highest consideration.

A handwritten signature in black ink, appearing to read 'R. Magno', is written over a horizontal line.

RAYMUNDO SANTOS ROCHA MAGNO
Ambassador
Permanent Representative of Brazil to ICAO

965808608
DIRECT

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>.

Name: PAULUS FIGUEIREDO / MARCIO CASTELO BRANCO / AROLDO SHOJI
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Q1. Name of the voluntary activity.

FUEL CONSERVATION PROGRAM

Q2. Type¹ of the voluntary activity.

<input type="checkbox"/> Unilateral commitment <input type="checkbox"/> Public voluntary scheme <input type="checkbox"/> Negotiated agreement <input checked="" type="checkbox"/> Other (Please describe the activity in the box below.)
COST SAVINGS INITIATIVE

Q3. Please mark all the participants² of the activity.

<input checked="" type="checkbox"/> Airline <input type="checkbox"/> Airline association <input type="checkbox"/> Manufacturer <input type="checkbox"/> Manufacturer association <input type="checkbox"/> Airport authority <input type="checkbox"/> Air traffic control <input type="checkbox"/> Government <input type="checkbox"/> Other (Please specify in the box below.)

Q4. Is the voluntary activity accompanied by a side agreement³?

<input type="checkbox"/> Yes (Proceed to Q4-1.) <input checked="" type="checkbox"/> No (Proceed to Q5.)

¹The 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.

² 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.

³ "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 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).

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 (CO₂)
 Methane (CH₄)
 Nitrous oxide (N₂O)
 Hydrofluorocarbons (HFCs)
 Perfluorocarbons (PFCs)
 Sulphur hexafluoride (SF₆)
 Nitric oxide & Nitrogen dioxide (NO_x)
 Water vapor (H₂O)
 Other (Please specify in the next box.)

AS WE ARE WORKING ON FUEL CONSUMPTION REDUCTION IT WILL BENEFITE ON ALL GHG RELATED TO FUEL BURN.

Q5-2. Please select all operations⁴ 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 emissions⁵ (Please outline the index in the box below.)
 Unit of GHG emissions⁶ (Please outline the index in the box below.)
 Introduction of specific technology
 Introduction of specific procedure
 Other (Please specify in the box below.)

TON-CO2

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⁴ 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.

⁵ The example of the unit is Ton-CO₂, Ton-C, m³-CO₂, etc.

⁶ The example of the unit is g-CO₂/RPK (Revenue Passenger Kilometer), g-CO₂/ASK (Available Seat Kilometer), g-CO₂/RTK (Revenue Ton Kilometer), g-CO₂/ATK (Available Ton Kilometer), etc.

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

PROCEDURES DEPENDE ON FUEL UPLIFT, FUEL CONSUMPTION AND FUEL FLOW AND HAS NOT REACH A MATURE STAGE. VARING DEPENDING ON EACH FUEL CONSUMPTION REDUCTION ACTION, SOMETIMES CONSIDERING THE POTENTIAL REDUCTIONS PUBLISHED BY ACFT AND/OR ENGINE OEM'S

Q7. Please answer the following questions concerning the target of the voluntary activity.

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

Yes (Proceed to Q7-2.) No (Proceed to Q8.)

Q7-2. Please describe the target of the voluntary activity, including substance of the target, target year, base year.

Q8. Please list the measures to attain the target or to reduce/mitigate GHGs.

FUEL CONSUMPTION REDUCTION

Q9. Please answer the following questions concerning periodic review of the voluntary activity.

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

Yes (Proceed to Q9-2.) No (Proceed to Q10.)

Q9-2. Please describe the frequency of the periodic review.

THE VOLUNTARY ACTIVITY IS YET TO CONDUCTED AS AN INTERNAL FORMAL PROJECT AND IT IS BEING REVIED ON ATTRTION BASIS AS ACTIONS ARE PUT IN PLACE

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 information⁷ 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”.)

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.)

⁷ 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.

Q12-2. Please outline the third party opinion.

Q12-3. How much of GHGs amount emitted per year, in CO₂ weight equivalent are reduced or mitigated/expected to be reduced or mitigated by the voluntary activity?

NOT ABLE TO PROVIDE EXACT AMOUNTS BECAUSE OF THE DIFFICULTIES PREVIOUSLY MENTIONED ON MEASURING GAINS FOR SOME SPECIFIC ACTIONS. HOWEVER, AS AN EXAMPLE, THE REDUCTION OF CAPTAIN DISCRETIONARY FUEL IN ONE OF OUR WIDBODY FLEET WE HAVE REDUCED APPROXIMATELY 1500 TON CO₂/MONTH COMPARING RESULTS IN DEC/09 AND JAN/08.

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

N/A

Q14. Please describe additional information, if any.

OUR FUEL CONSERVATION INITIATIVES

Duly completed questionnaires should be returned to:

Voluntary Measures Focal Point
ICAO Committee on Aviation Environmental Protection (CAEP)
Attention: Mr. Tetsu Shimizu
Policy Coordinator for Global Environment
Civil Aviation Bureau of Japan
e-mail: fpvm@mlit.go.jp
fax.: +81-3-5253-1656

Copy to:
Jane Hupe
Secretary, CAEP
E-mail: jhupe@icao.int
Fax: +1 (514) 954-6744

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

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Name: Viggo Thisted
Organization: VRG Linhas Aéreas SA – Grupo GOL
Phone: 55 11 50987405
Facsimile: 55 11 50982408
E-mail: vthisted@golnaweb.com.br

Q1. Name of the voluntary activity.

IATA MOU

Q2. Type¹ 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.)
Brazilian airlines committed to follow the IATA emissions reduction plan under a MOU.

Q3. Please mark all the participants² of the activity.

<input checked="" type="checkbox"/> Airline <input checked="" type="checkbox"/> Airline association <input checked="" type="checkbox"/> Manufacturer <input type="checkbox"/> Manufacturer association <input type="checkbox"/> Airport authority
<input type="checkbox"/> Air traffic control <input type="checkbox"/> Government <input type="checkbox"/> Other (Please specify in the box below.)

Q4. Is the voluntary activity accompanied by a side agreement³?

<input type="checkbox"/> Yes (Proceed to Q4-1.) <input checked="" type="checkbox"/> No (Proceed to Q5.)

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 Nitrous oxide (N₂O)
 Hydrofluorocarbons (HFCs)
 Perfluorocarbons (PFCs)
 Sulphur hexafluoride (SF₆)
 Nitric oxide & Nitrogen dioxide (NO_x)
 Water vapor (H₂O)
 Other (Please specify in the next box.)

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Q5-2. Please select all operations⁴ which are part of the voluntary activity.

International passenger flight
 Domestic passenger flight
 International cargo flight
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Q6. Please answer the following questions concerning the index to measure the effect of the voluntary activity.

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 Other (Please specify in the box below.)

Ton-CO ₂

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⁵ The example of the unit is Ton-CO₂, Ton-C, m³-CO₂, etc.

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

The will be calculated under the same standards used for the DEHSt emissions methodology to which VRG is designated.

Q7. Please answer the following questions concerning the target of the voluntary activity.

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

Yes (Proceed to Q7-2.) No (Proceed to Q8.)

Q7-2. Please describe the target of the voluntary activity, including substance of the target, target year, base year.

To improve fuel efficiency by an average of 1.5% per year to 2020, to stabilize carbon emissions from 2020 with carbon-neutral growth, and to a net reduction in carbon emissions of 50% by 2050 compared to 2005,

Q8. Please list the measures to attain the target or to reduce/mitigate GHGs.

Operational efficiency improvements, ATC coordination improvements, Winglets installation, Fleet rejuvenation, ACARS and EFB installation, RNP capability improvement.

Q9. Please answer the following questions concerning periodic review of the voluntary activity.

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

Yes (Proceed to Q9-2.) No (Proceed to Q10.)

Q9-2. Please describe the frequency of the periodic review.

Every six months.

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.

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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”.)

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Q12-2. Please outline the third party opinion.

Q12-3. How much of GHGs amount emitted per year, in CO₂ weight equivalent are reduced or mitigated/expected to be reduced or mitigated by the voluntary activity?

1.5% per year to 2020, to stabilize carbon emissions from 2020 with carbon-neutral growth, and to a net reduction in carbon emissions of 50% by 2050 compared to 2005,

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

No website other than IATA

Q14. Please describe additional information, if any.

Duly completed questionnaires should be returned to:

Voluntary Measures Focal Point
ICAO Committee on Aviation Environmental Protection (CAEP)
Attention: Mr. Tetsu Shimizu
Policy Coordinator for Global Environment
Civil Aviation Bureau of Japan
e-mail: fpvm@mlit.go.jp
fax.: +81-3-5253-1656

Copy to:
Jane Hupe
Secretary, CAEP
E-mail: jhupe@icao.int
Fax: +1 (514) 954-6744