



REPUBLIC OF POLAND
PRESIDENT
CIVIL AVIATION OFFICE

Grzegorz Kruszyński

ULC-LEP-5/0830-0089/01/09

CENTRAL REGISTRY:
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Warsaw, 31 December 2009

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COPY FOR:

**Mr Raymond Benjamin
Secretary General
International Civil Aviation
Organization**



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Dear Mr Secretary General,

As a reply to your letter AN 1/17-09/93 concerning the information on voluntary activity for greenhouse gas reduction/mitigation in the aviation sector please find attached the completed questionnaire on carbon offset calculator of LOT Polish Airlines.

Please accept, Mr Secretary General, the assurances of my highest consideration.



ATTACHMENT to State letter AN 1/17-06/077

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

Q1. Name of the voluntary activity.

Carbon offset calculator

Q2. Type¹ of the voluntary activity.

Unilateral commitment Public voluntary scheme Negotiated agreement
 Other (Please describe the activity in the box below)

Link to the carbon offset calculator is available on the LOT POLISH AIRLINES website www.lot.com.
 Visitors may calculate their carbon footprint for a chosen flight and vote to which of the proposed projects aimed at GHGs emission reduction and sequestration the means should be allocated in order to generate carbon offsets.
 After the 6-month trial period and depending on passengers' responses the company will decide if the scheme will fully be launched.

Q3. Please mark all the participants² of the activity.

Airline Airline association Manufacturer Manufacturer association
 Airport authority Air traffic control Government
 Other (Please specify in the box below)

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

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.

¹The feature of each type of the voluntary activities is 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: Public:** 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 issue.
- **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 to the participants. If you marked "Negotiated agreement", the public organization which agrees to the contract is included to the participants.

³ "Side agreement" is the agreement between the participant of the activity and 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 third 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).

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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)

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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
 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 emission⁵ (Please outline the index in the box below)
 Unit of GHG emission⁶ (Please outline the index in the box below.)
 Introduction of Specific technology
 Introduction of specific procedure
 Other (Please specify in the box below)

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

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.

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Carbon offset calculator has been developed in cooperation with RDC Aviation UK. It is based on the OAG schedule database, AEA LOT's average load factor and average fuel consumption per aircraft type. It calculates carbon footprint per passenger on required routing.

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.

After the 6-month period of trial / survey the company will review which of the proposed projects are most frequently chosen by passengers. There is a choice of 5 projects:

1. LULUCF – Land Use, Land Use Change and Forestry
2. Industrial Greenhouse Gas Offsets
3. Methane Capture
4. Energy Efficiency
5. Renewable Energy

So far LULUCF is the most popular

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.

Weekly reports. The company is monitoring the weekly use of the carbon calculator as well as survey results. So far 87% of customers declare that they would voluntarily offset their carbon footprint.

Q9-3. Is 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.

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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.

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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

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.

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activity?

 Yes (Proceed to Q12-2.) No (Proceed to Q12-3.)**Q12-2.** Please outline the third party.

Third party still to be decided

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?The company estimates to compensate the emission of 0,5 m tonnes in CO₂ weight equivalent in the year 2011.**Q13.** Please provide the website address for the voluntary activity, if any, in the box below.<http://www.rdcaviation.com/lot/LOTCalc.aspx>**Q14.** Please describe additional information, if any.

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