

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: Mr Gabor Szarvas
Organization: Budapest Airport Plc, Director Environment, Health and Safety (EHS)
Phone: +36 1 296 5424
Facsimile:+36-1-296-5543
E-mail: gabor.szarvas@bud.hu

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

Reduction of GHG emissions at Budapest Ferihegy Airport: installation of solar panels, reduction of energy use
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**Q2.** Type<sup>1</sup> of the voluntary activity.

<input checked="" type="checkbox"/> Unilateral commitment <input 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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**Q3.** Please mark all the participants<sup>2</sup> of the activity.

<input 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 checked="" type="checkbox"/> Other (Please specify in the box below.)
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Szent István University, Hungary
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**Q4.** Is the voluntary activity accompanied by a side agreement<sup>3</sup>?

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

**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.

<input checked="" type="checkbox"/> Carbon dioxide (CO <sub>2</sub> ) <input type="checkbox"/> Methane (CH <sub>4</sub> ) <input type="checkbox"/> Nitrous oxide (N <sub>2</sub> O) <input type="checkbox"/> Hydrofluorocarbons (HFCs) <input type="checkbox"/> Perfluorocarbons (PFCs) <input type="checkbox"/> Sulphur hexafluoride (SF <sub>6</sub> ) <input type="checkbox"/> Nitric oxide & Nitrogen dioxide (NO <sub>x</sub> ) <input checked="" type="checkbox"/> Water vapor (H <sub>2</sub> O) <input type="checkbox"/> 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.

<input type="checkbox"/> International passenger flight <input type="checkbox"/> Domestic passenger flight <input type="checkbox"/> International cargo flight <input type="checkbox"/> Domestic cargo flight <input checked="" type="checkbox"/> Other (Please specify in the next box.)
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<p>It contributes reduction/mitigation of GHGs at the entire airport.</p>
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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.

<input checked="" type="checkbox"/> Absolute quantity of GHG emissions <sup>5</sup> (Please outline the index in the box below.) <input type="checkbox"/> Unit of GHG emissions <sup>6</sup> (Please outline the index in the box below.) <input checked="" type="checkbox"/> Introduction of specific technology <input checked="" type="checkbox"/> Introduction of specific procedure <input type="checkbox"/> Other (Please specify in the box below.)
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<p>The unit is Ton of CO<sub>2</sub> emitted by the boilers operated for supplying heating and hot water of the existing airport premises.            Through the installation of solar panels, and introduction of energy saving operational procedures natural gas consumption in the boiler house, hence the total amount of CO<sub>2</sub> emissions is reduced.</p>
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<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.

Natural gas consumption is continuously measured. CO2 emission data is calculated from natural gas consumption data using standard multipliers.

**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.

The target of the project is a 5% reduction of annual CO2 emissions compared to previous year.

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

Installation of solar panels to produce hot water for the Terminal 1 in summer.  
Fixing and insulation of buildings to reduce heat losses.  
Rearranging of tenant occupancy to achieve more efficient use of space available and hence reduce heating demand.

**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.

Annual

**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”.)

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.)

<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.

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

Budapest Airport is participating in the EU Emission Trading Scheme, hence our CO<sub>2</sub> emissions are verified every year.  
In addition the airport is considering participation in ACI's Carbon Accreditation Scheme.

**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?

Appr. 750 tons CO<sub>2</sub> emission can be saved with this activity, total yearly emission is about 15 000 tons.

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

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

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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](mailto:fpvm@mlit.go.jp)  
fax.: +81-3-5253-1656

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