EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR ENERGY

Directorate C - Renewables, Research and Innovation, Energy Efficiency
C.3 - Energy efficiency

EMISSION MEASUREMENT METHODS FOR SOLID FUEL LOCAL SPACE HEATERS

17/12/2012

1. BACKGROUND INFORMATION

Last 20th of September 2012 a Consultation Forum meeting was held in order to discuss the Working Documents prepared by the Commission services on Ecodesign and Energy Labelling of Local Space Heaters (LSH).

One of the topics discussed during the meeting were the measurement methods to be used in order to determine the amount of particle matter (PM) on the flue gases from local space heaters (LSH) using solid fuels.

Different methods exist for measuring the PM emissions from solid fuel LSH. Clarification was requested during the Consultation Forum meeting by several participants on which measurement method was proposed to be used. These comments received during the Consultation Forum have been stressed on the written opinions received after it.

The Commission proposed to organise a specific meeting in order to discuss the existing measurement methods for addressing solid fuel LSH emissions and the possible future standardisation needs. This proposal was welcome by the members of the Consultation Forum.

2. EMISSION TEST METHODS

Solid fuel room heater standards prEN 13240:2011, prEN 13229:2011 and prEN 12815:2011 refer to CEN Technical specification "CEN/TS 15883: Residential solid fuel burning appliances- Emission test methods", for measuring the PM produced by these appliances.

According Annex A of CEN/TS 15883 different methods exist for measuring particle emissions.

- Austrian and German particle test methods (Annex A.1). .

  The emission requirements presented to the Consultation Forum last September were based on the Austrian and German particle test methods.

- Norwegian particle test methods (Annex A.2). These methods are based on the Norwegian standards NS 3058-1 and NS 3058-2.

- UK particle test methods (Annex A.3). These methods are based on the British standard BS 3841

3. OBJECTIVE OF THE MEETING

The objective of the meeting is discussing the following points:

- Appropriateness of making only reference to one emission test method or if it is necessary to analyse if equivalent requirements can be set using the Austrian and German test method and the Norwegian test method.

  If both approaches are to be used, strong data needs to be collected / presented in order to ensure that equivalent requirements are set with regard to both methodologies in order to avoid loopholes due to the fact of having less stringent requirements when making reference to one of the two different methodologies.

  The relation between the PM emission measurement method and its relation with the organic gaseous carbon (OGC) emission requirements need to be discussed as well.

- Reproducibility of test results, comments have been received indicating a lack of reproducibility of test results between different test centres, this topic and how to address it needs to be discussed.

- Standardisation needs. Mandate M/495 relating to harmonised standards in the field of Ecodesign includes on its Annex A the product group Solid fuel small combustion appliances. This Annex includes the following standardisation needs relating to emissions:

  "In view of the adoption of an Ecodesing implementing Regulation, ESOs are expected to develop harmonised standards covering:

  - *Emissions of NOx, CO, Organic Gaseous Compounds*

  - *Emissions of Particulate Matter, and its particle size distribution (subdivided in relevant size classes)."*

  The need for preparing and update to Annex B of M/495 in order to develop harmonised standards addressing the emission measurement methods for solid fuel LSH and/or a methodology for comparing the results of the different methods could need to be further discussed.