

Agenda item 4.1 (a)

Paragraph 27 of the annotated agenda

Concept Note

“Harmonized approach for monitoring the methane concentration in biogas and landfill gas (LFG)”

CDM EB 113

Bonn, Germany, 8 to 11 March 2022



Background

- EB 111:
 - Considered the concept note **“Improving clarity and consistency of methodological products”**;
 - Requested the secretariat to and the MP to:
 - Recommend a new methodological tool containing a repository of data/parameters that are common among different methodologies; and
 - Update the default factors in methodologies that are found to be not conservative in accordance with the latest science.



Purpose

- Respond to the mandate to recommend a new methodological tool containing a repository of data/parameters that are common among different methodologies.



Key issues

- A road-test was conducted to compare the requirements to **measure methane content in biogas/landfill gas** in different methodologies based on the step-wise approach below:
 - Identification of methodologies and methodological tools that use the concentration of methane in the biogas/LFG as one of the input parameters to determine emission reductions;
 - Compilation of the monitoring requirements for methane concentration from the different methodologies;
 - Identification of commonalities and differences



Key issues

- Identification of commonalities and differences
 - Differences and inconsistencies were identified with respect to the **denomination, description and units of parameters** in different methodologies and tools;
 - Some differences may be attributed to the **nature of small-scale and large-scale methodologies**;
 - Some requirements are **specific to the context** in which it is applied (e.g. use of a specific method to measure the emissions from landfill surface in AM0083 and AM0093);
 - Some refer to the **monitoring requirements of methodological tools**;
 - Methodological tools **do not include an option for periodic measurement**;



Proposed solutions

- There is **room to harmonize** the monitoring of the methane concentration in the biogas and in the LFG;
- Take into account the **differences based on the context** (requirements from small-scale vs large-scale) or **methodology-specific requirements**;
- The MP is of the opinion harmonization is done in methodologies and tools rather than in a separate tool i.e. revising methodologies and methodological tools that are **referenced by other methodologies to include consistent guidance**;
- Make more effective use of **international standards or an equivalent national standards**:
 - a) ISO 25140 (Determining the methane concentration using Flame Ionization Detector – FID);
 - b) ISO 6145 (preparation of calibration gas mixtures);
 - c) ISO 25139 (Determination of the methane concentration using gas chromatography).



Subsequent work and timelines

- Based on guidance from the EB, the MP will:
 - Include guidance for a harmonized approach to monitor the methane concentration of:
 - the biogas from wastewater treatment systems and manure treatment systems; and
 - in the LFG
 - Approved CDM methodologies and tools and relevant international and national standards are taken into account; and
 - Revise the relevant methodologies and methodological tools



Recommendations to the Board

- The MP recommended that the Board consider the concept note and provide further guidance regarding the work related to the revision of the methodologies listed in the concept note.

