

Agenda item 4.1

Paragraph 23 of the annotated agenda

Draft Standard

Sampling and surveys for CDM project activities and programmes of activities

CDM EB 105

Madrid, Spain, 25 to 28 November 2019

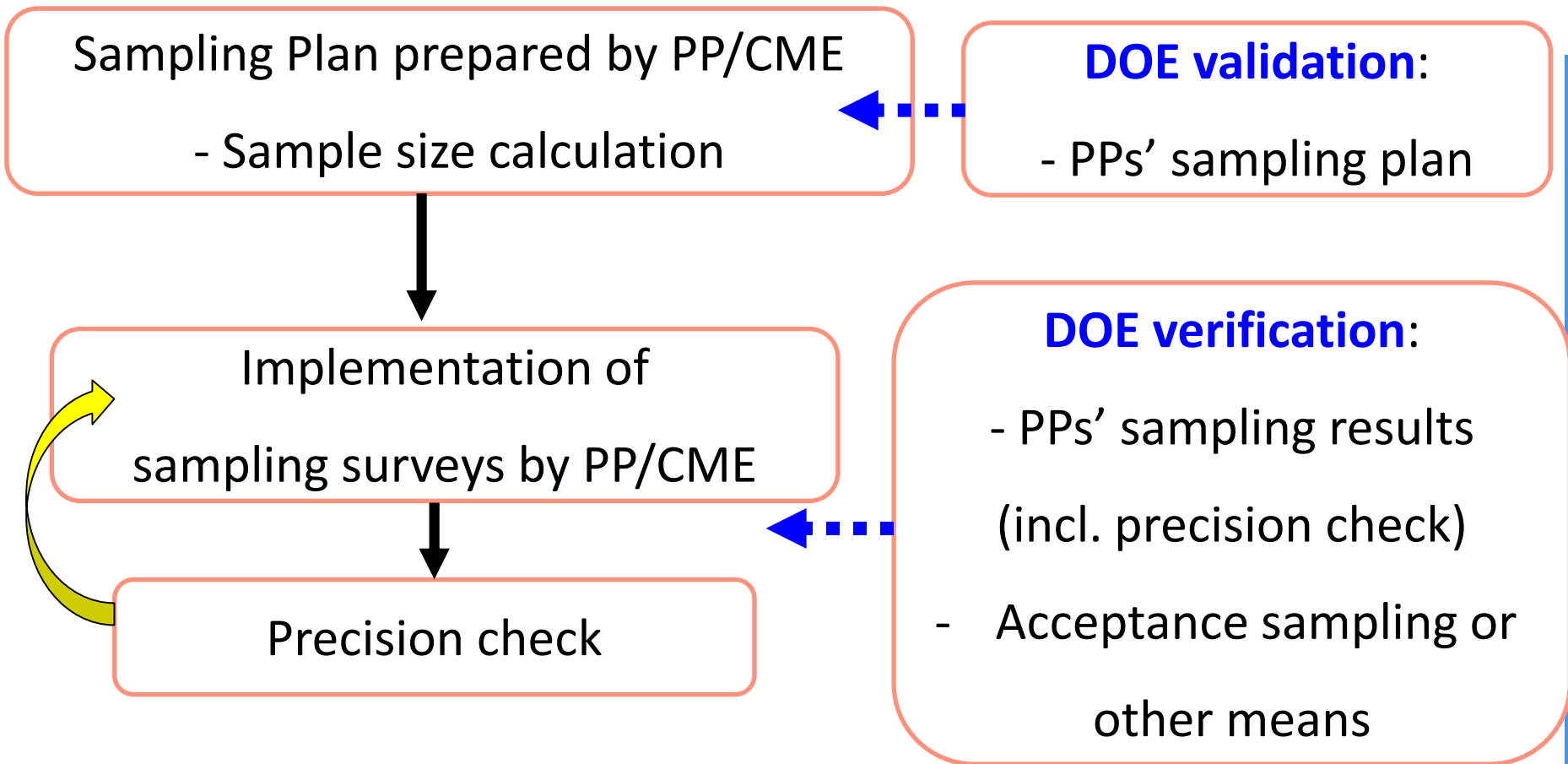


Background and objectives

- The work carried out under the mandate to revise “AMS-II.G: Energy efficiency measures in thermal applications of non-renewable biomass”.
- The purpose is to provide further guidance on sampling requirements for DOEs, PPs and CMEs based on the experience gained taking into account stakeholder feedback.



Overview



Sampling for DOE validation/verification

Validation, determining:

- ✓ Whether the proposed sampling plan will provide parameter value estimates in an **unbiased** and **reliable** manner;
- ✓ Whether the proposed sample size and sampling method is adequate to achieve the minimum **confidence/precision**;
- ✓ Whether the proposed sampling plan will ensure that samples are **randomly selected** and are **representative** of the population.

Verification, determining:

- ✓ Whether PPs/CMEs have implemented the sampling and surveys according to the sampling plan in the registered monitoring plan;
- ✓ Whether the required **confidence/precision** has been met;
- ✓ Whether the selected sample was **representative** of the population.



Sampling for DOE validation/verification

- The DOE **may** apply a sampling approach for on-site visits and/or remote surveys as part of validation/verification.
 - ✓ **When PPs/CMEs have not applied a sampling approach**, the DOE **may** apply a sampling approach, provided that samples are randomly selected and are representative of the population.
 - ✓ **When PPs/CMEs have applied a sampling approach**, the DOE **may** apply **acceptance sampling**.



Sampling for DOE validation/verification

The DOE **may** apply **acceptance sampling** as part of validation/verification activities i.e.:

- a) Take a random sample of the PPs sample records;
- b) Check, **using professional judgment**, the acceptability of the PP records
- c) Determine **n**: the size of the sample and **c**: the acceptance number

Acceptable Quality Level (e.g. 1%): Chosen by DOE

Unacceptable Quality Level (e.g. 20%): Chosen by DOE

Producer Risk i.e. chance that the DOE will wrongly reject the PPs records, 10% agreed by the Board

Consumer Risk i.e. chance that the DOE will wrongly accept the PPs records, 10% agreed by the Board



Sampling for DOE validation/verification

		Producers = 5% Consumers = 5%		Producers = 10% Consumers = 10%		Producers = 10% Consumers = 20%	
AQL	UQL	Sample Size (n)	Accept. number (c)	Sample Size (n)	Accept. number (c)	Sample Size (n)	Accept. number (c)
1%	10%	61	2	38	1	29	1
1%	15%	30	1	25	1	10	0
1%	20%	22	1	18	1	8	0
0.5%	10%	46	1	38	1	16	0
0.5%	15%	30	1	15	0	10	0
0.5%	20%	22	1	11	0	8	0



Sampling for DOE validation/verification

- The decision about whether or not to accept PP's data depends on number of discrepancies between the DOE's data and the PP's data.
- If the DOE observes greater than c discrepant records in the sample, the PP's set of records is **not accepted**. (*then..??*)
- If the number of discrepant records is equal to or less than c , the PP's set of records is **accepted**.



Key issues

The DOEs/PPs requested for further guidance/pragmatic solution for the acceptance sampling.

- Feedback from Practitioners workshop (just before MP79)
- Feedback from DOE assessors' calibration workshop
- Experiences from project assessment (issuance)



Proposed solution (1)

The table provides only **idealised numerical targets**.

The DOE may exercise **professional judgement** to determine if the DOE records are compatible with the PPs/CMEs' and hence can be accepted or not.

The DOE may want to **allow for factors affecting** individual measurements, leading to discrepancies. For example, the DOE may consider if the discrepancy observed between PPs/CMEs' record and the DOE's record is **attributed to**:

- a) **a temporal issue** (e.g. technology retention rate/performance is known to deteriorate over time), or
- b) **a weather-related issue** (e.g. flooding in which project technology or measuring instrument was affected during a specific period of time), or
- c) **another issue not under the control of the PPs**(e.g. unexpected high or low voltage incidence in the grid), or
- d) **other issues related to technology characteristics and survey methods** (see Table 2: Survey and data collection methods and preference for use of the Sampling Guidelines).



Proposed solution (2)

- Examples on the criteria for deciding what constitutes a discrepancy.

Parameter	How PPs/CMEs conduct sampling surveys (= PP/CME records)	How DOEs could check (= DOEs records)	Criteria for deciding what ultimately constitutes a discrepancy
% of ICS in operation	- Sample-based survey (e.g. questionnaire surveys/interviews)	- Cross-check of a sample of PP's sample (e.g. questionnaire surveys/interviews)	- DOEs results, accounting for duly justified differences
ICS efficiency	- Procedures prescribed by CDM methodologies (e.g. ISO, Water Boiling Tests)	- Check test reports/methods; - Check qualifications/capability of testers;	- Whether conducted by qualified institutions/testers; - Whether conducted in accordance with approved established intl/national standards, procedures and test methods prescribed by CDM methodologies
Water quality	- Water quality tests prescribed by CDM methodologies (e.g. E. coli tests)	- Witnessing of testing, if feasible	



Proposed solution (3)

Para 37: If the DOE observes greater than c discrepant records in the sample, the PPs/CMEs' set of records is **not accepted**. In this case, providing due justifications, **one of the following options may be chosen**:

- a) The DOE, if requested by the PPs/CMEs, may consider assessing additional samples.
 - Denote the **new acceptance number** by C_{new} .
 - If the resulting discrepancy is less than or equal to C_{new} , the PPs/CMEs' set of records **is accepted**.
 - If the resulting discrepancy remains greater than C_{new} , the DOE may **raise a CAR** to PPs/CMEs (e.g. revised estimation of emission reduction to err on the conservative side, undertaking additional surveys) or may **reject** the PPs/CMEs' set of records;
- b) The DOE may **raise a CAR** to PPs/CMEs (e.g. revised estimation of emission reduction to err on the conservative side, undertaking additional surveys) or may **reject** the PPs/CMEs' set of records.



Impacts

The proposed revision will provide further guidance on the sampling requirements for DOEs and PPs/CMEs and will facilitate the development of CDM project activities and PoAs.



Recommendation to the Board

The MP recommends that the Board adopt this draft standard, to be made effective at the time of the Board's approval.

