



**PROJECT
DEVELOPER
FORUM**

UNFCCC Practitioners Workshop

Compare and contrast CDM monitoring methodologies with EU ETS MRG

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Summary

- The purpose of this presentation is to provide a brief comparison of EU ETS verification vs CDM verification
- It is not a critical assessment of the CDM process
- We recognize that the two systems have very significant differences
- We propose that there are some strengths in other systems which might benefit the CDM going forward.

Performance

EU ETS

- Over 11,000 facilities verified between January and March each year (*over 50,000 verifications*)
- ? independent verifiers
- Any major errors?
- Any major delays?
- Stakeholders are not complaining about the MRV process

CDM

- 2764 issuances (as of 24th May 2011) since 20 October 2005
- 52 DOEs (current or past)
- Most EU based DOEs perform EU ETS verification as well
- Bottlenecks and delays in the process
- Lack of transparency
- Annex 6 to EB61 highlight stakeholder dissatisfaction

Principles

EU ETS

- Monitoring and reporting principles
 - Complete, consistent, transparent, true, cost effective, faithful, improvement of performance in monitoring and reporting of emissions
- One set of guidelines applied to all types of facilities
- Clear recognition of calculation (based on activities) and measurement based methods (based on continuous measurement of flow rates and concentrations); operator chooses which is best

CDM

- Accurate, conservative, relevant (from VVM)
- Monitoring meths specifically designed for different types of project activities
- Mixture of calculation and measurement

The Monitoring Plan

EU ETS

- Specifies a monitoring plan and lists the items to be included:
 - Description of installation
 - Responsibilities for M&R
 - List of sources to be monitored
 - Description of measurement based meth to be used
 - Tiers for activity data, emission factors, oxidation and conversion factors
 - Description of measurement systems
 - Compliance with uncertainty thresholds as per tiers
- De minimis sources defined
- Plan can be changed if it improves accuracy of reported emissions

CDM

- Requires monitoring plan in PDD
- Must address specific parameters listed in monitoring methodology
- Inconsistent requirements in relation to uncertainty, measurement frequency, calibration etc.
- Inconsistent treatment of small sources, often placed under leakage
- Requires parameter specific QA/QC and measurement procedures
- Changes to improve accuracy are effectively discouraged by transaction barriers

Formulae and treatment of uncertainty

EU ETS

- Combustion and process CO₂ emissions are **calculated** using two simple equations
- Emission, oxidation + conversion factors are specified in Annex
- Tiers, or accuracy levels, are assigned for each parameter depending on total emissions from the facility
 - Eg a facility emitting <50,000 t CO₂ per annum burning solid fuel must show combined uncertainty of all instruments used to measure solid fuel consumption is $\pm 7.5\%$
- Sources which are **measured** must use the highest tier technically feasible not incurring unreasonable costs

CDM

- Can address all 6 Kyoto gases, not just CO₂
- Complex formulae, particularly for determining activity levels
- Can be inefficient, repetitive
- Meth specific notation
- Variable oxidation / emission factors
- No / inconsistent treatment of accuracy and uncertainty

Missing data, control and QA

EU ETS

- Specific procedures for missing data
- Clear reporting requirements for operators
- Retention of information
- Control system, control activities, quality assurance, corrective actions, continuous improvement process, management systems

CDM

- Included in monitoring plan (i.e. project specific, often missing)
- Reporting requirements often dictated by DOE
- Retention of information specified for each parameter
- Limited scope to improve system – transaction barriers discourage efforts to improve

Verification

EU ETS

- Objective – emissions monitored in accordance with the guidelines and reliable and correct data reported
- Verification opinion with reasonable level of assurance... free from material misstatements and material non-conformities
- Verification methodology described
- Materiality thresholds defined
- Reporting format – data not prose

CDM

- periodic independent review and ex-post determination by the DOE of the monitored reductions in GHG emissions that have resulted from the project activity
- Absolute level of assurance
- Verification methodology described in VVM
- No recognition of materiality
- Reporting format contains significant prose and scope for inconsistencies

Conclusions

- CDM has developed a different approach to MRV compared to other schemes
- Other schemes (notably the EU ETS) have some distinct advantages over the CDM, as evidenced by their performance
- PDF recommends that in reviewing the overall approach to MRV, the Secretariat and Meth Panel carefully assess the strengths and weaknesses of these different approaches.