

UNECE Group of Experts on Coal Mine Methane

Comments on the ACM0008

(ACM0008 version 7, valid from 13/08/2010)¹

As requested by the UNFCCC during the video conference on 11 October 2010 with representatives of the UNFCCC, the UNECE Group of Experts (GE) on Coal Mine Methane (CMM) is respectfully submitting comments on ACM0008 in advance of the meeting between the GE and the UNFCCC on 10 November 2010 in Bonn. These comments were prepared with the aim of identifying approaches and initiating discussion on ACM0008 with respect to (i) addressing negative impacts of the Methodology; (ii) simplifying, and improve the objectivity of the Methodology; and (iii) removing errors and ambiguities.

In response to this request, the GE has identified the following:

1. Widen applicability of drainage from the surface using CBM wells to reduce outburst risk
2. Ensure that ACM0008 is not applied to encourage unsafe mining practices
3. Consider adding abandoned mine methane (AMM) as a source of GHG emissions
4. Refine the conditions for crediting to encourage open-pit mine pre-drainage
5. Remove the excessive gas venting that ACM0008 requires where there is an existing thermal use included in the baseline
6. PDDs should reflect the real world - allowing for changes in project activity
7. Simplifying the Methodology by clearly identifying relevant parameters
8. Error in the methodology for calculating VAM emission reductions (p19)
9. Benchmarks for captive power and power exported to the grid in investment analysis.

We explore each of these points in more depth below. The GE recognizes that not all of these concerns can be resolved during this first meeting and that a full dialogue will take some time; however, we believe that certain issues warrant immediate attention. In particular, coal mine safety is a pillar of sustainable development, and we believe that through ACM0008 there is potential to harness the CDM to reduce the risk of death and injury from explosions in coal mines. This, in turn, will achieve both the greenhouse gas emission reduction and the sustainable development goals of the CDM.

Widen applicability of drainage from the surface using CBM wells to reduce outburst risk

In some coal mining areas, outburst of coal and gas occur in underground coal mines all too often leading to multiple deaths and injury. The risk of an outburst is reduced by extracting gas ahead of

¹ <http://cdm.unfccc.int/methodologies/DB/OA37XAW7EI9WHJVZ97RGH2EZ5S9E93/view.html>

mining to reduce the gas content. This can be done using drilling techniques both underground and from the surface.

Surface CBM borehole drilling can allow a much longer period of drainage and a greater gas content reduction than can often be achieved from underground provided the drilling density is sufficiently high, but it is very costly (drilling at depth costs in the region of USD 500,000 per well) which prevents the activity being common practice. Surface predrainage using CBM wells is applicable within the Methodology but does not provide a sufficiently strong incentive to promote wider use of this technology other than in shallow and moderate depth mining areas where seam permeability is high and gas is easily extracted.

There is therefore an opportunity to encourage this activity in outburst coals to improve mine safety. Coal seams at risk typically exhibit variable to low permeability and therefore gas recovery is insufficient to make projects economically viable. To strengthen the viability of this high cost activity a condition in the methodology is required that would allow all CBM recovered from blocked out mining panels and for a distance of 200m (or the proposed predrainage borehole length) around the panel to be worked to be credited subject to application of the additionality tool. The baseline is a release of all of the CBM through venting as VAM or vented as underground pre drained gas, but not synchronous with the project activity. Mines that are outburst prone and practice outburst precautions have well documented proof of these activities which could be included as an applicability condition within the methodology.

Ensure that ACM0008 is not applied to encourage unsafe mining practices

The CDM process through the current version of ACM0008 can encourage unsafe practices which could lead to serious accidents causing many fatalities and this is contrary to the underlying principles of the CDM. The Chinese Ministry of Environmental Protection's CMM Standard provides an example. The Standard requires CMM containing 30% methane or higher to be used and not vented but if the concentration is less than 30% the gas can either be used or vented. Enforcement of the standard would simply encourage mines to reduce their gas drainage standards or dilute the gas to allow venting as the lowest cost option. That is, there would be no net change to the baseline whether the standard was enforced or not.

CMM specific environmental regulations which do not impact on the baseline of venting irrespective of whether enforced or not should therefore be disregarded. The Methodology should include guidance on how to present an argument to support such a conclusion for project developers and DOEs.

Recognizing the baseline as unaffected by a regulation in the above case would also prevent the CDM being used to encourage a reduction in mine safety and potentially save the lives of many miners.

Mine safety laws aimed at reducing explosion risk should be sacrosanct and projects which do not comply should not be applicable within the methodology even if safety laws are not enforced. Alternatively, a set of minimum mine safety conditions based on international best practice could perhaps be specified in the Methodology which should be demonstrated for a project to be applicable.

Abandoned mine methane (AMM)

The benefit of extending the applicability of the Methodology to include AMM would be reduced emissions from coal mines after closure and improved public safety by preventing uncontrolled gas migration to the surface. Provided the time-related aspects are properly addressed, it should be feasible.

Refine the conditions for crediting to encourage open-pit mine pre-drainage

This is a recent addition to ACM0008 which will make a significant contribution to improved safety in open pit mines by reducing the risk of gas ignitions when drilling blast holes. Crediting is currently limited to the “zone of influence” which is the same used for underground pre-drainage, i.e. “For open cast mines, avoided emissions from methane extracted should only be credited in the year in which the seam is mined through the well zone of influence or the de-stressing zone.”

It is suggested that gas extracted becomes eligible in retrospect for wells which are subsequently abandoned due to air contamination arising from infiltration of air across the face.

Remove the excessive gas venting ACM0008 requires where there is an existing thermal use included in the baseline

The conservative approach to establishing a worst case and unrealistic baseline with existing thermal use discourages total use of the gas and thus unnecessary venting. An approach is needed which can demonstrate that no additional fuel is introduced, or that if CMM is a supplementary fuel any increase in fuel use is offset with a leakage correction and that there has been no increase in heat demand that would have been met with CMM. Proving all these would be challenging but at least it creates an opportunity to maximize CMM use and destruction as opposed to venting large volumes of methane to prove there is no overlap between the thermal baseline and the project activity.

Designing PDDs to match the real world - allowing for changes in project activity

Changes in project activities can arise:

- During the engineering design and subsequent evolution of projects when external factors can require changes to be made to utilization plant or monitoring plans.
- Where new opportunities arise to improve efficiency, increase clean energy generation to enhance emission reductions and raise safety standards.
- Where a PDD includes a group of projects it is quite likely that at least one may not be constructed as planned or in the form as designed.

Flexibility can be accommodated within the project design by identifying possible scenarios and testing with the additionality tool. Guidance is needed in the Methodology for project developers and DOEs on how to achieve this. While there is a mechanism for requesting a change to a project activity, the process is time consuming and adds uncertainty/risk to the project investment. Proofs of additionality may require engineering judgment which DOEs are sometimes reluctant to accept. It is suggested that

the DOE's accredited technical advisors should be sufficiently qualified to exercise and record such judgment.

Simplifying the Methodology by clearly identifying relevant parameters

Data and parameters not required: The Methodology should clearly show which parameters are relevant to each application and which are measured, which calculated and which are entered as referenced constants. This will improve clarity and transparency and reduce the risk of delays arising during validation, completeness checks and the registration process.

Data and parameters monitored: Confusion can arise in respect of wet and dry gas measurement and a lack of consistency with the flaring tool. That PMM and CMM can be combined for measurement is now accepted. However, the amount captured is not needed only the amount destroyed/utilized, except where there is thermal use in the baseline.

Error in the methodology for calculating VAM emission reductions (p19)

Baseline emissions in a VAM project should be VAM sent to the project activity (MMox) and not VAM sent to the project activity and destroyed (MDox), as currently stated by the methodology. The current calculation results in subtracting non-combusted methane (PEox) twice:

- Correct calculation:

$$ER = MMox * GWP - MDox * 2.75 - PEox * GWP$$

$$\text{With } MDox = MMox - PEox \text{ (p11)}$$

- What the methodology is suggesting:

$$ER = MDox * GWP - MDox * 2.75 - PEox * GWP = (MMox - PEox) * GWP - MDox * 2.75 - PEox * GWP$$

$$\text{Or } ER = MMox * GWP - MDox * 2.75 - 2 * PEox * GWP$$

Benchmarks for captive power and power exported to the grid in investment analysis.

The Methodology allows for CMM generated captive power and exported power replacing fossil fuel power plants. Developers and DOEs need guidance on investment analysis to ensure selection of appropriate benchmarks and reference to official country specific data.