bvek Bundesverband Emissionshandel und Klimaschutz

German Emissions Trading Association

Public Input of bvek

to the

Joint Implementation Supervisory Committee (JISC)

regarding

The concept of materiality in determinations and verifications

26/03/2010

Summary:

bvek, the **German Emissions Trading Association,** proposes two key principles:

1. The remaining uncertainty of the determination/measurement of the emission reduction of a JI project should not become a burden on the environment but on the JI project and its economy respectively.
2. There should be no general threshold for the materiality determined by the JISC but the threshold should be determined individually by the project participants.

The problem:

The proposal of bvek is the result of an internal discussion animated by a planned publication of Mrs. Wade-Murphy as a bvek member with respect to the Materiality and the CDM. This planned publication is attached for information as it is easily transferable to the JI mechanism. Basically this planned publication proposes to transfer the rules of materiality used in the EU Emission Trading System (EU-ETS) to the CDM. Dependent on the volume of reduced emissions per year two materiality thresholds of 1 % and 5 % are used in the sense that a possible difference of the true emission reduction and the determined/measured reductions of a maximum of 1 % or 5 % is not material and accepted as sufficient accurate. By that there would be avoided a disproportional high effort (costs and time needs) to achieve a practically absolute accuracy.

Though bvek recognise the problem of disproportional high efforts to reach a practically absolute accuracy we do not back this proposal but propose a better alternative to solve this problem adequately.

The simple take-over of the EU-ETS rules of materiality would mean for the case of the JI mechanism:
A determined/measured emission reduction of a JI project of for instance 100 t CO2e could be in the worst case only a real reduction of 95 t CO2e. Nevertheless the project would receive an allocation of 100 ERUs which could be used by a plant operator in the EU-ETS to pay for the determined/measured emission of 100 t CO2e of his plant. But the real emission of the plant could be up to 105 t CO2e. Together this would result in the risk of an increase of emissions of 10 % towards the overall emission reduction targets. This appears to us as not acceptable!

Also a reduction of the percentage of the threshold would not change the basic problematic nature of these rules. In addition, all legally determined percentages of thresholds are more or less arbitrary; they may be suitable for specific projects but must not that way.

The solution:

As a better solution to this problem we propose the above stated two key principles. They would mean for the above described example that if the remaining uncertainty would be of a maximum of 5 %, the JI project would not receive an allocation of 100 ERU but only of 95 ERU. It remains to the project operator/participants to decide if at all and if to which extent to reduce the uncertainty by additional costly efforts and correspondingly to increase the ERU allocation. Every project operator/participants has to find out and to decide the individual optimal relation of costs and benefits of advanced determinations/measurements. And they can do better than any state or UNFCCC institution.

Obviously the determination of the remaining uncertainty of a JI project would be of much higher relevance, as well for the validation of the project as well for the verification of realised emission reductions, and would be put in the centre of the examinations of the JISC and its bodies.

The bvek proposal would solve the problem of appropriateness of emission reduction determination/ measurements efforts while not be a burden on the environment. Both interests, of the project operators/participants and of the environment, are served.

Title: Materiality and the Clean Development Mechanism

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Summary

Although materiality is a well established principle and widely used in financial and greenhouse gas auditing, the Clean Development Mechanism (CDM) has not yet incorporated the concept. This leads to uncertainty on the part of auditors, called Designated Operational Entities (DOEs), in the appropriate scope for CDM auditing. Along with other factors, this has increased CDM project transaction costs and processing times immensely, prejudicing especially small-scale projects. Here we describe the concept of materiality, examine how its absence has affected the functionality of the CDM and finally, provide a proposal for how to incorporate materiality into the CDM. By introducing materiality thresholds to the system, CDM operation would become more efficient, reducing the global transaction costs and doing no harm to the environmental integrity of the mechanism.

The Concept of Materiality in Auditing

Materiality is an important concept of auditing. In order to express an opinion on data or information, an auditor needs to form a view on the materiality of all unidentified errors or uncertainties. A materiality threshold provides guidance to auditors on what constitutes a material discrepancy, so that they can concentrate their work on areas that are more likely to lead to materially misleading errors[1]. In the case of CDM projects, these are errors that could cause the assessment to provide the wrong conclusion on whether or not to award CERs to the project[2]. There are two phases of CDM auditing: Validation, where the project description documents are verified before the project is registered, and Verification, where the emission reductions brought about by the project activity are checked before issuing CERs to the project participant. Thus far, the CDM has not incorporated the concept of materiality into its auditing guidelines for either of these phases.

History of Materiality under the CDM

Several attempts have been made to integrate materiality into CDM auditing. First, one of the EB's technical advisory panels, the Methodologies Panel, proposed to the EB to incorporate

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[1] http://www.ghgprotocol.org/standards/corporate-standard

[2] http://www.climatetrust.org/documents/OQICDMpaper_webversion.pdf

materiality in the CDM in April 2008, but their proposal was not accepted. Then, in May 2008, materiality was included in the first public draft of the CDM Validation and Verification Manual (VVM) to standardize CDM auditing. The draft said, "The DOE shall ensure that the reported emission reductions of the CDM project activity are free of material misstatement... defined as a misstatement due to errors, omissions, and misrepresentations in the reported emission reductions, which exceeds a materiality threshold of [1%for large projects][and 5% for small projects] of the final emission reductions." At its meeting in May 2008 (EB39), the CDM EB planned to consider public comments on the draft VVM in August. However, the CDM EB did not consider the VVM draft again until October, and finally adopted a revised version in November 2008 (EB44). But, all text about materiality had been removed from the final approved version.

After several months of experience applying the VVM, the DOEs urged the EB in July 2009 to adopt a materiality threshold of 5% for all CDM projects below 100,000 CERs per year and 1% for those above that level (EB48). The EB members discussed, but were unable to agree to incorporate a materiality threshold for the CDM. During the debate, some EB comments indicated a lack of understanding of how materiality would be applied in CDM auditing. One EB member, Mr. Martin Hession, stated that among the EB members, "...there's a debate... whether we're willing to allow you [the DOEs] the latitude to leave things out...," while another, Mr. Hugh Sealy, postulated that, "...at a time when... we're almost flooded by the Request for Reviews, and... some of the blame for the Request for Reviews we're laying at the feet of the performance of the DOEs, ...that we introduce this concept of materiality and that it could be perceived as a 'get out of jail' clause or an escape clause for the DOEs not to do their work." Other EB members posed questions about the definition of materiality. Mr. Clifford Mahlung, for example, said, "... this selection, with respect to materiality, of what is included and what is not included, I think that is probably where we have the most problems..."[3]

In its most recent communication related to materiality, the EB decided that, "the introduction of the concept and its use was premature given the current stage of development of the CDM..."[4] However, the CDM is a mature market mechanism, which registered its first project on 18 November 2004, and now has over 2000 projects registered and more than 600 projects issuing CERs.

Approved Approaches to Materiality in the Carbon Markets

Existing GHG Programs have requirements on how materiality and level of assurance should be considered during the auditing process. Several could be considered less mature than the CDM,

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[3] All quotations from webcast of EB48, session 5.(d) on 17/07/2009, available at http://unfccc2.meta-fusion.com/kongresse/cdm48/templ/ovw_unfccc.php?id_kongressmain=86

[4] CDM-EB-51 Meeting Report, http://cdm.unfccc.int/EB/051/eb51rep.pdf

but they all have incorporated the materiality concept into their GHG auditing. The table below gives an overview of how some GHG programs address these issues.

	Consideration	Materiality Threshold	Level of assurance
Climate Action Reserve (CAR)	Verification bodies must ensure that the calculations of GHG reductions or removals are accurate within the 5% materiality threshold by recalculating all emission estimates based on underlying activity data.	+/- 5% from the overall emission reductions +/- 10-15% for forest carbon stocks	Reasonable
NSW Greenhouse Gas Reduction Scheme (GGAS)	Clause 8 of the Panel Agreement requires that during the course of any performance review, the panel member must provide reports, documents or information in connection with services undertaken by the auditor including a record of how materiality has been assessed and determined	The scheme does not provide a numerical formula	Reasonable
European Union – Emissions Trading Scheme (EU-ETS)	According to the decision, the verifier shall plan and perform verification with an attitude of professional scepticism recognizing that circumstances may exist that cause the information contained in the Annual Emissions Report to be materially misstated.	5 % for installations with average reported annual emissions < 500 $ktCO_2$ 2% for installations with average reported annual emissions > 500 $ktCO_2$	Reasonable
Voluntary Carbon Standard (VCS)	The standard requires that the validator or verifier shall select samples of data and information to be validated or verified to provide reasonable assurance and to meet the materiality requirements of the specific project.	5 % for projects < 1,000 $ktCO_2$ 1 % for projects > 1,000 $ktCO_2$	Reasonable

Materiality under the CDM in Practice

If the materiality concept is applied in CDM auditing, it is not about what the auditor sees, but about what he potentially does not see. For every audit, there is a gradient of security that the auditor can have about the validity of the statements he must certify. This gradient can be pictured, hypothetically, to extend from “not sure at all” to “100% sure”, with not sure at all meaning that the auditor has not even read the statements, to 100% sure meaning that the auditor has personally accompanied, constantly, all the processes described in the statements. Obviously, in practice, the former is of no use, while the latter is impossible.

In certifying statements under the CDM, the auditors therefore must strike a balance between level of effort (in between not reading the documents at all, to accompanying 100% of the actual activities), and how sure they can be that the statements are valid. The correct balance is partly indicated by what materiality threshold is set to guide their auditing. A very high materiality threshold would mean the auditor has to make a detailed check of only the inputs that have a major effect on the conclusion about the project's CER amount. For inputs with little impact, a simple check would be enough. A very low materiality threshold would mean the auditor has to make a detailed check of almost all the inputs that affect the project's CER amount, even in a very small way.

Since 100% assurance is not possible, it means that the auditor- and the user of the certification- must accept the possibility that the auditor's check may fail to identify some errors, omissions and misrepresentations in the statements. However the question is, could these missed errors, omission and misrepresentations change the decision of the auditor to provide the certification? The materiality threshold should be set at a level, such that the user of the certification is satisfied that their decision to issue CERs would not be changed by variation below that level.

For example, in Validation of a new renewable power station project, the project plans to bring about total emission reductions of 50,000 tCO_2 per year (at 50,000 MWh/yr * 1 tCO_2/MWh). If, for example, a materiality threshold of 5% were in place, the auditor would design an auditing plan to focus most of his attention on validating inputs and assumptions that could affect the ER amount by 2,500 tCO_2 or more (5% of 50,000). The auditor would also check the inputs and assumption affecting the ER amount by less than the materiality threshold; however, these would receive relatively less emphasis than the inputs with impacts above the threshold. For example, the auditor would likely make an exhaustive check of the forecast of annual generation; on the other hand, if the PDD showed a power density of 100 W/m^2, the auditor might check the assumptions of the calculation against the project's feasibility study, but not against other sources. However, if the PDD showed a power density of 11 W/m^2, the auditor might undertake quite a detailed check of the input factors, since a minor change down to 10 W/m^2 would implicate annual project emissions of 4,500 tCO_2e, above the materiality threshold.

In the Verification of the same project, as a result of the materiality threshold, the auditor might focus efforts on the measurements of electricity generation, while undertaking a simple check of the measurement procedure and amount of diesel used in the emergency generator that the monitoring report shows is equivalent to only 2 tCO_2 for the annual monitoring period, well below the materiality threshold.

The implementation of a materiality threshold does not mean that the DOE has a mandate not to pay attention to detail, or that the DOE shall not consider all the possible sources of GHG emission. Materiality does not give DOEs the option to "conveniently" leave out important details or an excuse not to report mistakes and problems. Instead, it gives the opportunity to the DOEs to explain their decisions about how to audit a CDM project against the materiality definitions.

Currently, the Secretariat also is acting in an auditor-like function, since the Secretariat re-verifies all the finalized validation and verification documents that are submitted by the DOEs. Therefore, the Secretariat should also apply materiality in its assessments, if the concept were to be adopted in the VVM for DOEs. In other words, the Secretariat reviewers should also design their review of project documents to focus on material issues. The Secretariat could do so by first undertaking a strategic review of which factors are most likely to have a material impact on the awarding of CERs to the project, and then focus the majority of their completeness check and re-verification efforts on these components of the documentation.

Although there is no official guidance on either level of assurance or materiality, DOEs are obliged to apply some level of assurance and materiality thresholds, since absolute assurance is impossible to achieve, as previously demonstrated. Introducing an approved materiality concept would allow that to be standardized, thereby improving consistency of CDM auditing.

Proposal for a Materiality Threshold for the CDM

Based on the best carbon accounting practices, two different materiality thresholds are proposed, depending upon the size of the emission reductions under the project activity: 5% for projects below 100,000 tCO_2e emission reductions per year, and 1% for projects above 100,000 tCO_2e emission reductions per year. The threshold percentage is in comparison to the total amount of annual emission reductions estimated or brought about by a project activity; thus, for example, all projects reducing 40,000 tCO_2e per year would have the same absolute threshold of 2,000 tCO_2e, while a project reducing 300,000 tCO_2e per year would have an absolute threshold of 3,000 tCO_2e. The proposed materiality thresholds would provide for similar absolute thresholds, in the range of zero to 10,000 tCO_2e, for the majority of projects registered under the CDM[5]. The best place to include the CDM requirements for the materiality thresholds is in the VVM although an ordinary decision from EB would already be enough.

Impacts of Implementing Materiality in the CDM

Effects on CER numbers: The logical outcome of implementing materiality would be no net change in CER issuance. Because materiality is concerned with the probability of discovering errors, omissions and misrepresentations that could affect the emission reductions calculation, a balance would be expected in the non-discovery of immaterial issues that would decrease, and those that would increase, the results of the emission reduction calculation**.**

Standardization of Materiality concept among Project Developers, DOEs and EB Panels and Teams: There are significant gains in efficiency to be made by introducing a globally accepted auditing guideline to the CDM.

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[5] Thus far, only 42 of 1873 registered projects have annual estimated ERs above 1,000,000 tCO_2e

Streamlining the Validation & Verification process: The main consequence of implementing materiality under the CDM would be to avoid unnecessary delays during CDM auditing, since auditors would have the mandate to focus on material issues during Validation and Verification. This would lead to better use of DOE resources, since DOEs could devote auditing time to the questions about project documentation most likely to result in misallocation of CERs.

Decrease on CDM timelines: If by implementing materiality, the time required for validation and verification decreases, it is possible that more projects would be able to successfully complete requests for issuance by 31 December 2012, hence resulting in a larger total issuance of CERs by that date than would otherwise have been the case**.**

General decrease on the transaction costs of CDM: This is the most important impact of introduction of the materiality concept to CDM auditing. The decreases on transaction costs could allow smaller projects to participate in the CDM, increasing the penetration of the mechanism especially in the Least Developed Countries (LDCs), enabling a better use of the limited existing resources of all parties involved and speeding up the regional distribution of the CDM.