



Annex 13

GUIDELINES FOR OBJECTIVE DEMONSTRATION AND ASSESSMENT OF BARRIERS

(Version 01)

I. Introduction

1. The following paragraph is quoted from decision 2/CMP.4 – Further guidance relating to the clean development mechanism:

“36. Requests the Executive Board to further enhance the objectivity of approaches used to assist in the demonstration and assessment of additionality while ensuring environmental integrity, including, where appropriate:

- (a) Standardized methods to calculate financial parameters;*
- (b) Quantitative approaches to the demonstration of barriers;*
- (c) Assessment of common practice, including the definition of the applicable region and similar technologies;”*

II. Background

2. This paper focuses on request as per paragraph 36 (b) that seeks to enhance the objectivity of approaches to demonstrate and assess additionality by providing quantitative approaches to the demonstration of barriers.

3. The clear guidelines on objective demonstration of barriers would considerably reduce the uncertainties, for project participants, in proving the eligibility of projects under the CDM. These guidelines aim to provide the basis for unbiased objective ruling, as well as efficient and effective management for work related to evaluation of project additionality by the Registration & Issuance Team, the secretariat and CDM Executive Board. These guidelines can be complemented by guidelines on how to validate the barriers in an updated version of the VVM, to be used by the DOE.

III. Proposed Guidelines

General Guidelines

4. **Guideline 1:** While demonstrating barriers related to the lack of access to capital, technologies and skilled labour, the project proponents shall provide information on the nature of the companies and entities involved in the financing and implementation of the project. More specifically:

- While demonstrating barriers related to the lack of access to capital, information should include nature of company, organization and its ownership and, financial information;



- While demonstrating barriers related to technologies and skilled labour, information should include nature of company, organization and its ownership, and previous experience with similar project (that is under consideration for CDM) in other locations.

Example: A company that is a subsidiary of a multinational group may have different access to capital, technologies or skilled labour than a local SME company.

Rationale: This additional information is the key for assessment of the relevance of barriers related to access to finance, technology and know-how of operation.

5. **Guideline 2:** The barrier test in Step 3 of the Tool for the demonstration and assessment of additionality states that *“If the CDM does not alleviate the identified barriers that prevent the proposed project activity from occurring, then the project activity is not additional.”*

Demonstrate in an objective way how the CDM alleviates each of the identified barriers to a level that the project is not prevented anymore from occurring by any of the barriers. Provide transparent and documented evidence, and offer conservative interpretations of this documented evidence. Anecdotal evidence can be included, but alone is not sufficient proof.

Example 1: For example, the prospects of a project, that it will generate CERs, may attract financiers who would normally not finance this kind of project without CDM.

Example 2: Project proponents (PPs) can make an argument that additional CDM revenues have helped overcome the increased risk associated with the barrier. For this, they have to transparently demonstrate that the expected revenues from the CDM are significant when put into relation with the risk(s) caused by the barrier(s) and/or total cost of the project.

Rationale: Most projects face some type of barriers. An objective barrier analysis separates those projects out from other projects for which it can be demonstrated that the CDM has an actual impact on alleviating barriers. Such analysis rejects projects that face the same barriers with and without the CDM and where no impact of the CDM can be objectively demonstrated on the barriers.

Guideline to demonstrate specific barriers

6. **Guideline 3:** In order to make an objective claim for a specific barrier, the PDD confirms the existence of the barrier by using evidence sources listed in the Tool for the demonstration and assessment of additionality¹ and the Combined tool to identify the baseline scenario and demonstrate additionality,² by demonstrating, for each of the barrier, that in similar circumstances (in similar industries/sectors, in companies of similar size and ownership structure, in similar projects) the barriers actually prevented the implementation of other project(s).

Example: The existence of a technological barrier for high pressure steam technology is confirmed by showing evidence that the use of this technology in the considered sector is marginal e.g. below 10%.

¹ Sub-step 3b (3) (a to e).

² Outcome of Sub-step 2b (a to g).

Rationale: Most investment projects face some type of barriers, but it is very difficult to evaluate whether a barrier actually prevents the investment from being done. The evidence of presence of the barrier for other project(s) under similar circumstances, using reputed sources, makes them much more objective and therefore makes a strong argument that a project is additional. Note that this approach is not mandatory and that other approaches to enhance objectivity of barrier analysis may also be pursued.

7. **Guideline 4:** Barriers that can be mitigated by additional financial means can be quantified and represented as costs and should not be identified as a barrier for implementation of project while conducting the barrier analysis, but rather should be considered in the framework of investment analysis.

Example 1: The necessary trained labour to operate and maintain new clean technologies may not be available right away. This does not necessarily prevent implementation of project, e.g. most suppliers of equipment are able to provide sufficient training and/or even provide themselves staff to operate the plant. This however, adds additional costs (salaries, training costs, service fees) those can be considered in the NPV/IRR analysis.

Example 2: Unlike the above example, in some countries the local safety situation and political instability may make it impossible to get this kind of support and the lack of trained labour may become a real barrier that can hardly be overcome by additional financial means. In such case, additional financial means cannot overcome the barrier and the barrier analysis can be used.

Rationale: A barrier, that can be monetized and quantified as an additional cost in an investment analysis, can demonstrate in a much more objective way how the barrier prevents investment from being pursued.

8. **Guideline 5:** Barriers related to increased risks of damage (i.e. that the equipment is damaged due to technological barriers, lack of know-how etc.) can be quantified by the calculation of probability of loss and loss expenses, if the underlying data and assumptions can be objectively and transparently justified.

Note: This quantitative approach to barriers is an *option* in case sufficient data is available; as a limited number of projects may have the data to follow this approach.

Example (Illustrative):

Definitions and approach:

The probability of loss P is the probability that a specific loss event takes place per year.

The loss expenses E are the typical expenses that accrue if the loss event happens (due to the damage of the equipment).

The average annual expected loss is then $L = P * E$

Investors tend to invest in risky projects if there is a clear evidence that the potential downside, should a loss event happen, is (much) more than compensated by the potential additional annualized return R .



As a rule of thumb, a barrier is considered as valid if the following two requirements are fulfilled:

- (i) The annualized return of the project without the CDM R_{wo} is lower than the expected loss L :
$$R_{wo} < L$$
- (ii) The annualized return of the project with the CDM R_{CDM} is considerably higher than the expected loss L :
$$R_{CDM} > L * 1.5$$

Note: A more advanced approach could look at several risks in a project and look at the distribution of probabilities for events to happen.

Numeric example:

The project is the implementation of new high-tech steam turbine to produce power. The high risk of a failure of the novel technology represents a barrier to its implementation. An independent expert estimates that under the conditions at the project site the project plant equipment would suffer a major damage event because of lack of know-how, on average at every 10th year, i.e. $P = 1/10$. In the event of a major damage, the total loss expenses (including repair of equipment and loss of generation revenues during repair) would be $E =$ USD 1 million. This leads to an annual expected loss $L = 0.1 * \text{USD 1million} = \text{USD } 100'000$.

With this, the barrier would be deemed valid in the context of the CDM if: (i) the project without the CDM would not be able to generate a return of USD 100'000 and; (ii) would generate a return of at least USD 150'000 with the CDM.

Rationale: If barriers cannot be directly monetized as in guideline 4 above, the only way to quantify them is by using probabilities. The approach sketched follows loosely similar procedures in the insurance industry to estimate the annual premium to cover a loss event. Note that this approach is an option that may be used in cases where sufficient data is available to quantify the risks. Therefore, this guideline is not mandatory.

9. **Guideline 6:** In case the PPs make the claim for investment barriers, they should demonstrate in the PDD that the financing of the project was assured only due to the benefit of the CDM. Therefore, it should be demonstrated that the loan approval (or other significant financing decision(s)) by the lender takes explicitly the CDM registration into account.

Example 1: For the cases where the investment is done by a company which also purchases the CERs and the loan agreement mentions that, there is an objective demonstration that the CDM facilitated the lending.

Example 2: For the cases where it can be objectively demonstrated that a significant part of the project investment is provided upfront by a company as a pre-payment for expected CERs, there is an objective demonstration that the CDM actually enabled the financing of the project.

Rationale: Loan agreements are an objective means to demonstrate the barrier.

*Guideline regarding Least Developed Countries*

10. **Guideline 7:** For projects in Least Developed Countries³ it is sufficient to transparently describe the relevant barriers, as less stringency is needed with regards to data availability in the actual demonstration of barrier, as compared to the projects in other countries. Projects in Least Developed Countries are not bound by the provisions in this guideline and may use other approaches that are more adapted to the local circumstances.

Example: For a co-generation project in a Least Developed Country it may be sufficient to demonstrate a history of non-implementation of co-generation over a long time period to demonstrate the relevance of the barrier to implementing co-generation technology.

Rationale: Projects in Least Developed Countries can be assumed in general to face significant barriers to their implementation. At the same time, data availability in these countries is considerably limited which complicates the demonstration of additionality and therefore further increases transaction costs.

History of the document

Version	Date	Nature of revision(s)
01	EB 50, Annex 13 16 October 2009	Initial adoption.
Decision Class: Regulatory Document Type: Guideline Business Function: Methodology		

³ As defined by the United Nations General Assembly in its resolutions (59/209, 59/210 and 60/33) and its updates.