

The World Bank

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CDM Executive Board
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Honorable Members of the CDM Executive Board,

Submission of Comments on a Proposal for an Enhanced Barrier Test (EBT)

The Carbon Finance Unit welcomes the opportunity to contribute to the discussion regarding the development of an enhanced barrier test (EBT) for project activities that have a potentially high probability without CER revenues. Our comments are contained in the enclosed attachment.

We would be happy to provide any further clarification and/or further contribute to a discussion on project profitability, barrier tests and additionality if the Board finds this useful.

With kind regards,

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Attachment

Submission of comments on a proposal for an enhanced barrier test (EBT) for project activities that have a potentially high probability without CER revenues

The Carbon Finance Unit welcomes the opportunity to contribute to the discussion regarding the development of an enhanced barrier test (EBT) for project activities that have a potentially high probability without CER revenues. Our comments are in relation to the draft proposal on this subject as considered by the CDM Executive Board at its 44th meeting.

It is understood that the CDM Executive Board has concerns that some “profitable” (to be defined) projects using only the barrier analysis may not be truly additional. As a result the CDM EB decided that profitable projects need to be more closely scrutinized with regard to additionality. This response to the call for public inputs, made in the light of the Methodology Panel’s draft guidance on “enhanced barrier analysis”, draws on the World Bank’s experience in implementing CDM projects to clarify:

- (a) How to define highly profitable project activities?
- (b) How to identify which project activity types can potentially be highly profitable without CER revenues and as such should be subject to an EBT?
- (c) How project participants can demonstrate that their project activity with a potential for high profitability without CER revenues still faces barriers?

(a) How to define highly profitable project activities?

There are several ways of viewing profit and therefore profitability of project activities. In the broad sense, defining profitability is simple: projects that make money. In a more detailed sense, the application of the definition and the resulting assessment of economic profitability leading to an investor’s decision to undertake a project or not varies depending on many factors. For example the timeframe, indirect benefits, the type of investor, opportunity cost, price expectations, expected market developments, perceived risks, and other strategic considerations. It is important to keep in mind that traditional profitability analysis consistently fails to identify all the barriers to project implementation due in part to the fact that risks taken by investors are valued subjectively by individuals within an investing company. Investment decision are thus rarely based on financial considerations alone, but are affected by many immeasurable factors including experience, personality, relationships and business networks.¹

¹ That profitability is interpreted differently by different companies and is difficult to achieve is supported by the following facts: a) Firms within the same sector often opt for different technologies and business models; this suggests that they assess profitability differently. b) Not all firms are equally successful in a given market; this suggests that profitability is not always obvious or straightforward to achieve. c) Models and economic theory continue to identify (highly) profitable activities, but these activities are still not widely pursued by investors and companies (e.g. energy efficiency measures); this suggests that more factors may be at play than can be modelled or included in a formal profitability analysis.

Defining profitability objectively and fairly for all projects is therefore problematic. For *non-regulated sectors*, an interpretation of “average” profitability specific to a given sector or sub-sector, or to similar types of firms would be useful. However, the patterns of profit maximization even for similar firms and decision makers would not always be comparable taking into account their initial or current stock of technologies, processes and practices, financial state, status of know-how, trained personnel, managerial incentives, etc. In *regulated sectors*, the profitability may not be a strictly relevant indicator for investment or resource allocation decisions, e.g. when entities operate under imperfect schemes for tariff calculation, budgeting and subsidies, which do not provide incentives for rational economic behavior. Additionally, any definition of profitability that focuses on an assessment of a project’s profits and losses will focus scrutiny at a project level rather than at a generic level. Given that the current CDM administrative process is already suffering from bottlenecks, an approach that seeks to tighten scrutiny of possible “non additional” profitable projects by introducing additional project specific administration rather than the implementation of generic or standardized rules, appears contrary to the Executive Board’s declared aims of reducing transaction costs and streamlining procedures.

In considering the problems associated with identifying a procedure for defining profitability the question arises as to whether a requirement for project proponents to assess the profitability of their projects is the most appropriate approach for determining which projects should be requested to use an enhanced rather than simple barrier analysis. This call for public inputs presumes that it is necessary to define profitability to ensure that highly profitable projects are truly additional. However, profitability (as explained above) is extremely hard to define with accuracy and it will therefore also be difficult to validate or verify objectively. Furthermore, the development of an EBT based on financial or economic profitability may bring the barrier test very close to the investment analysis test and would appear to be inconsistent with previous decisions of the COP/MOP and the Executive Board to provide project entities with the *option* of demonstrating additionality through *either* a barrier test or investment analysis.

SUGGESTION 1

Given that a profitability definition for each CDM project will not necessarily be the best approach for addressing the Board’s concerns about “highly profitable” projects, we suggest defining an EBT so that it both:

- a) **Increases scrutiny of baseline definitions:** Baselines define an hypothetical or anticipated real life situation without the CDM project. Highly attractive “non additional” projects should therefore by default appear in the baseline scenario. Therefore, it should be possible to address concerns about whether some projects would occur without the CDM by closely scrutinizing baseline definitions.
- b) **Builds on experience gained from the review process:** Specific project types have already, as a result of the existing project review process, been shown to be suspect in terms of additionality definitions. Since the existing review process assesses if projects are additional or not, it is possible to identify which project types may merit particular scrutiny. It should be recognized that the definition of a list that would identify project types as being

of high risk in terms of successful registration would imply a signal to the market to discount potential CERs when assessing such projects given the perceived CDM risks. The approach is further explained in section b) below.

b) How to identify what kind project activity types can potentially be highly profitable without CER revenues and as such should be subject to an enhanced barrier test?

Up until EB40, for twenty-two (22) projects out of 146 that either used barrier analysis alone or in combination with investment analysis a review was requested. A list of these projects is contained in Annex A. Of these 22 projects, fourteen (14) projects were rejected, five (5) registered and three (3) had corrections requested following the review. Seven (7) of these 22 projects were small scale. A review of these projects could be a starting platform for identifying possible project types that have already been identified as needing additional scrutiny under the review process. To date the review process has shown that project types requiring additional scrutiny include:

- i. Renewable projects such as wind, hydro, biomass (without CH₄) – where it is likely that the economic impact of the CDM on the internal rate of return (IRR) is small (i.e. between 1-3%).
- ii. End of pipe projects such as waste gas or heat utilization projects – where a waste product is given financial value and could still retain financial value even without the CDM.
- iii. Industrial sector projects such as cement production – where production process improvement result in increased profitability even without the CDM.
- iv. Energy efficiency projects – where reduced energy consumption results in increased profitability even without the CDM.

SUGGESTION 2

It is important to note that given the specific well-documented barriers preventing the implementation of energy efficiency projects under the CDM and given the work that is currently being undertaken to improve their inclusion under the CDM by the CDM Executive Board, the Secretariat and CDM panels, energy efficiency projects should be exempt from any requirements for enhanced barrier analysis.

SUGGESTION 3

The other three project types however could be – after cross-checking the identified potential target project types with market developments in different countries – considered as potential target project types for application of an EBT. This list of project types need not be static, and the review process may well identify other sectors that would benefit from additional scrutiny and the application of the EBT. It should be noted that a distinction between greenfield and brownfield projects is considered to be of limited relevance, since the key issue is whether a project's additionality is more suspect than another projects additionality not where a project would be constructed.

SUGGESTION 4

To standardize procedures and create predictability for project proponents regarding when a project type might be added or removed from the list for which an EBT is required, it could be useful to introduce a metric in the form of a cut of point. E.g., when a defined percentage of project submissions within a project type category are required to undertake a review combined with a certain observed market penetration rate, project types in this category can be considered for inclusion on the list required to apply the EBT. Likewise, when over a defined period of time a project category is required to undertake a review less than the defined percentage, project types in this category would no longer be required to undertake an EBT. Additionally, information regarding common practice (defined without CDM and not mandated by legislation) for different project types and technologies could also provide a trigger for extending the EBT to additional project types on the list. This approach may help ensure that the EBT is dynamic accommodating itself to new project types and situations based on the experiences of the review process.

SUGGESTION 5

The EBT list of project types could be updated at the end of every commitment period with the possibility of mid-term review of the list of project types based on the results of the CDM review processes.

c) How project participants can demonstrate that their project activity with a potential for high profitability without CER revenues still faces barriers?

SUGGESTION 6

The draft EBT proposed by the Methodology Panel requires that the project proponent prove that at least one barrier can not be overcome by the profitability of the project. We suggest that the wording be changed to “the project proponent should prove that at least one barrier or the aggregation of barriers presents an obstacle that can not be overcome by the high profitability of the project but that can be overcome by the CDM”.²

We further suggest that the proposed tool also incorporate a procedure to assess not only individual barriers but also the aggregation of barriers because the impact of the interaction between barriers can have a stronger aggregated impact on a company even if individually they appear insufficient reason to stop a project from moving forward.³

The impact of aggregate barriers can be considered as being either:

- a) Barriers that complement or reinforce each other, increasing the degree of obstacles in undertaking a CDM project. For example, an insurmountable barrier may exist due to a combination of i) lack of information about new technologies and ii) limited technological capabilities. It is the combination of these two barriers

² However, as noted earlier, the project types that are identified as having high profitability (however defined) will likely lead to a discounting of CERs by investors to reflect risks of non-registration and may discourage and hinder the development of good CDM projects. The case of energy efficiency is a clear example.

³ In the literature (Ravi & Shankar, 2005; Wang et al, 2008) different interaction among barriers is summarized as: a) driving barriers, which can aggravate several other (dependent) barriers and need to be addressed in priority; b) independent barriers that are mostly influenced by driving barriers; and c) barriers with both strong driving power and dependency that need maximum attention for debottlenecking implementation of an activity or decision.

that creates the obstacle that not even the profitability of the proposed project activity can overcome.

- b) Barriers that are additive in terms of increasing efforts or costs needed in overcoming several distinct barriers that occur as a group. For example, lack of experience with a first of a kind technology and/or lack of access to markets and/or networks could impact a firm's decision to produce and market a product using a first of a kind technology. With the additional revenues from the CERs and the additional marketing or public relations value of establishing a CDM project the obstacles can be overcome. It is important to note that in many project cases the value of the CDM is more than simply the financial value of the CERs produced by the project and the public relations and marketing value can be the trigger in overcoming barriers.

SUGGESTION 7

Given that the EBT is likely to target project types, it may be possible to develop a catalogue of barriers for specific countries and regions for each project category over time. For example studies and surveys by independent (recognized) organizations on institutional, regulatory, technology-type barriers, generic for individual project activities, could provide useful reliable evidence. Such a catalogue – developed top-down with the possibility of expert inputs under the auspices of the EB – of standard evidence for barriers could be a useful reference for project proponents and increase confidence in barrier substantiation (i.e. increase confidence in their validity) while reducing significantly transaction costs associated with extensive needs of data collection and analysis by project proponents. Similarly information regarding first of a kind technologies in different countries or regions, and perhaps market penetration rates, could also be used to exempt projects from the EBT.

SUGGESTION 8

Should the EBT be approved, we suggest its inclusion as an annex to the existing additionality tool. It could then be amended as needed without necessarily requiring a re-opening of discussions on the additionality tool itself or on an approved methodology.

Annex

Projects Reviewed that Used Barrier Analysis (up to EB40)

The following table shows the projects⁴ that have used barrier analysis and where a review was requested. The projects marked in blue print are those that used barrier and investment analysis, the rows marked in yellow are small scale projects.

EB Ref-Num	EB Mtg	Status	Name of CDM Project Activity	Project Type	Methodologies
1397	EB39	Corrections (following review)	Comprehensive utilization of waste coal gas for electricity generation project in Shaanxi Xinglong Cogeneration Co. Ltd	waste gas heat utilization	ACM0002/ACM0004
1354	EB38	Registered	Flare gas recovery project at Hazira Gas Processing Complex (HGPC), Hazira plant, Oil and Natural Gas Corporation (ONGC) Limited	waste gas heat utilization	AM0037
1383	EB38	Rejected	Koppal Green Power Limited Biomass Power Project	Biomass	AMS-I.D (Ver 10)
1296	EB37	Corrections (following review)	Waste Heat Recovery project" at Saraikela, Kharsavan, Jharkhand by M/s Kohinoor Steel Private Limited	waste gas heat utilization	ACM0002(ver 6.)
1324	EB37	Registered	Power generation from waste heat of submerged arc furnaces	waste gas heat utilization	ACM0004 (ver2)
1148	EB36	Rejected	DSM-Asmoli Bagasse Cogeneration Project	waste gas heat utilization	ACM0006 ver 4
1181	EB36	Corrections (following review)	6.0 MW Biomass based cogeneration power plant of Rama Paper Mills Limited, Kiratpur, Uttar Pradesh	Biomass	Ams I.D ver 10
1215	EB36	Rejected	DSM-Dhampur Bagasse Cogeneration Project	waste gas heat utilization	ACM0006 ver 4
1235	EB36	Rejected	"Rio Grande do Sul Cooperatives Small Hydro Power Plants"	Renewable (hydro)	ACM0002 ver.6
1131	EB35	Registered	"4.5 MW Wind Power Project in Kadavakallu, Andhra Pradesh"	Renewable (wind)	AMS-1.D ver. 10
1175	EB35	Registered	9.8 MW Renewable Energy Generation for the grid at South Asian Agro Industries Limited in Raipur District, Chattisgarh	Renewable	AMS-1.D ver. 10
0977	EB32	Rejected	Dalmia Sugars Limited Nigohi project	waste gas heat utilization	ACM0002/ACM0004
0754	EB31	Rejected	Use of blast furnace slag in the production of blended cement at Votorantim Cimentos	Cement	ACM0005 ver 3

⁴ The following projects have been identified with reference to the CDM database produced by Institute for Global Environmental Strategies (IGES) at <http://www.iges.or.jp/en/index.html>. The projects include all projects that were under review until EB40 (i.e. projects put under review after EB40 were not included in the assessment).

0854	EB31	Rejected	Production of blended cement with blast furnace slag at Cimento Mizu	Cement	ACM0005 ver 3
0861	EB31	Rejected	ACEL Blended cement project at Sankrail grinding unit	Cement	ACM0005 ver 3
0863	EB31	Rejected	Optimum utilisation of clinker for Pozzolana Portland Cement (PPC) production at Birla Plus Cement in Bathinda, Punjab, India.	Cement	ACM0005 ver 3
0951	EB30	Rejected	Energy efficiency and fuel switching measures in the caustic soda and sodium cyanide plant at Vadodara complex of GACL	Energy Efficiency/fuel switching	AMS-II.C/AMS.II.D/AMS-III.B
0715	EB29	Rejected	Blended Cement Project with Fly Ash – Lafarge India Private Limited	Cement	ACM0005 ver 3
0454	EB27	Rejected	"Increasing the Additive Blend in cement production by Jaiprakash Associates Ltd (JAL)	Cement	ACM0005 ver 2.
0530	EB27	Registered	ARAPUtanga Centrais ELétricas S. A. - ARAPUCCEL - Small Hydroelectric Power Plants Project	Renewable (hydro)	ACM0002 ver. 5
0311	EB24	Rejected	Lazaro Energy Efficiency Project	Energy Efficiency	AMS.II.D. ver7
0317	EB24	Rejected	El Dorado Energy Efficiency Project	Energy Efficiency	AMS.II.D. ver7