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Members of the CDM Executive Board

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Washington DC, August 14, 2006

Dear Mr. Miguez,
Dear Mr. Stehr,
Honorable Members of the CDM Executive Board,

The World Bank appreciates the opportunity to submit views on methodological barriers to developing energy efficiency projects under simplified modalities and procedures for small-scale CDM project activities. This submission is offered in response to the Executive Board's call for public inputs on the following questions:
(a) Does the current definition (eligibility limits) of type II small-scale CDM project activities pose barriers to developing projects under this type?
(b) Are there other barriers in this regard that relate to methodological issues?
We hope that our submission will be helpful to support the work of the CDM Executive Board on these important questions.

With kind regards,

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Methodological barriers to develop energy efficiency projects under simplified modalities and procedures for small-scale CDM project activities
Submission of the World Bank
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The following observations and comments on the barriers for small scale energy efficiency projects are based on the World Bank's Carbon Finance unit experience of several years with small projects, notably projects that we develop for the Community Development Carbon Fund and other World Bank administered carbon funds. Our experience demonstrates that the development of small scale projects is often as challenging and costly as the development of regular size projects. These challenges are related to (i) difficult circumstances on the ground such as small sources, high risks, many involved parties and intermediaries, and generally the barriers that energy efficiency investments face all over the world (ii) methodologies that are simplified but do not sufficiently respond to the reality on the ground that these projects face, and (iii) low volume of emission reductions and high fixed administrative and transaction costs for such projects.

Background

Energy efficiency projects are in general underrepresented in the CDM, accounting for about 5% of the total expected CER volume of the UNFCCC pipeline. This is particularly true for projects using the approved small-scale methodologies of type II. Out of 256 registered projects as of August 1, 2006, 96 are using approved small-scale methodologies of type I and III and only 8 are using type II methodologies. And, of these 8 projects, only half use them exclusively, i.e. not in combination with type I and type III methodologies. Measured against the potential of energy efficiency projects for low cost emission reductions, their under representation becomes even more extreme.

This under-representation of energy efficiency projects in the UNFCCC pipeline is not only a lost opportunity in terms of CER volumes but could potentially become a challenge for ensuring support for and continuity of the CDM itself. Given the uncertainty about the post-2012 regulatory framework, project activities that have a short pay-back period and require a short time to implement are likely to become increasingly important over the next couple of years.

Independently of the CDM, energy efficiency projects in developing countries face substantial barriers. Often even those energy efficiency measures that financially outperform alternative investments in the same markets are not undertaken due to a host of barriers not related to the CDM. The bad performance of energy efficiency projects under the CDM is therefore not exclusively related to shortcoming in CDM methodologies.

Eligibility limits for SSC type II energy efficiency project activities

Within the Marrakesh Accords, SSC type II project activities were defined as "Energy efficiency improvement project activities which reduce energy consumption, on the supply and/or demand side, by up to the equivalent of 15 gigawatts/hours per year". This size limit applies also to bundles of energy efficiency project activities.

As confirmed by many energy experts, it is our view that this eligibility limit is too low to allow for a larger number of CDM project activities under the approved SSC type II methodologies. The average expected emission reductions of the four registered CDM project activities using exclusively type II methodologies are 6.300 tCO2e per year where the range is from 3.400 to 12.000 tCO2e per year. By comparison, the 88 registered CDM project activities using exclusively the type I methodology for grid connected renewable power generation (AMS.I.D) expect emission reductions averaging 24,600 tCO2e per year, with the largest projects projected to achieve annual emission reductions well beyond 50,000 tCO2e per year. The Word Bank's Community Development Carbon Fund can normally not support projects with overall emission reductions of less than 50,000 tCO2 per year.

The eligibility limits of SSC type I projects are defined as renewable energy output capacity of up to 15 megawatts. In the case of a small hydropower plant this can translate in power generation of up to 130 GWh per year. Whereas type I project activities can claim emission reductions out of displaced power generated by fossil fuel use of up to 130 GWh per year, type II project activities are capped at 15 GWh per year. There is clearly a non-level playing field regarding the treatment for different types of SSC project activities.

In order to overcome the aforementioned internal inconsistency between the eligibility limits of type I and type II project activities and allow for a size of SSC energy efficiency projects that is feasible, we suggest increasing the size limit of type II projects by a factor of ten, i.e. from the current 15 GWh annual energy savings to 150 GWh.

In this context, it is important to also recognize that CDM related transaction costs are to a great extent fixed costs. Given the prevailing uncertainty about the post-2012 regulatory framework, the share of CDM related transaction costs to be covered by pre-2012 CDM revenues is increasing over time. For this reason, the size limits for all types of SSC CDM project activities should be increased to make sure that for each type of project activity a minimum of 50,000 tCO2e annual emission reductions can be expected. It is our experience that most project activities below this size jeopardize their feasibility.

Other methodological barriers for SSC type II energy efficiency project activities

Lack of a definition of CDM programs

The possibility of clustering several small activities into one single CDM project activity, using a single PDD, is of particular importance for energy efficiency activities because individual activities are often too small for stand-alone CDM project activities even under simplified SSC-methodologies.

One way to cluster individual activities is bundling. Under current bundling rules each individual activity that is part of a bundle has to be known ex ante and has to be listed in the PDD for validation and registration. Furthermore the owner of each activity becomes a CDM project participant. Bundling is therefore primarily designed for a project sponsor undertaking a small number of activities eligible as SSC CDM project activities (e.g. replacing five inefficient industrial boilers with efficient ones). For this purpose bundling has become a helpful and often used tool. However, for obvious reasons bundling is not appropriate for clustering a large number of micro activities (e.g. changing one million inefficient light bulbs for efficient ones) implemented over time under a program of activities.

Programs are of particular importance for demand side energy efficiency activities, e.g. in the field of efficient lighting or efficient appliances. Experience shows that, in general, these activities will only happen under an appropriate incentive or labeling scheme. In this context the CDM can play a crucial role in providing the program implementing entity with a cash flow to cover its operational costs that is not related to energy savings accruing at the level of individual participants in the program. The approved SSC methodology AMS.II.C ("Demand-side energy efficiency programmes for specific technologies") builds on this experience and explicitly targets "programmes that encourage the adoption of energy efficient equipment". However, activities under AMS.II.C have not benefited from being organized as programs because programs of activities have not yet been defined.

In contrast to a bundle, the exact number of individual activities implemented under a program is not known ex ante (i.e. prior to monitoring). But, of course, an estimation of the targeted population and the associated emission reductions can and should be undertaken. Furthermore, the individual participants in a program can, in practice, not become CDM project participants; only the program implementing entity can be expected to be a meaningful project participant considering the rights and obligations of project participants and the related administrative costs. Programs need therefore a different treatment than bundles. This is recognized by the COP/MOP1 decision that "project activities under a programme of activities can be registered as a

single clean development mechanism project activity" and reflected in the ongoing work of the Executive Board on definitions of programs.

In our view, it would be important to ensure that the modalities to register project activities under a program of activities as a single CDM project activity fully support small energy efficiency projects, in particular demand side energy efficiency projects, and are made available without delay. Basically, these modalities would only need to explicitly allow for the ex post identification of the exact number of the individual activities under a program within the monitoring reports instead of an ex ante identification of individual activities within the PDD of a bundled project. Hence, the corresponding bundling rules should not apply to programs, and it should not be required that each individual participant in a program becomes a CDM project participant.

Misleading rules on leakage due to crowding in or crowding out of old equipment

Each of the approved type II SSC methodologies includes the provision that leakage has to be considered "if the energy efficiency technology is equipment transferred from another activity or if the existing equipment is transferred to another activity".

In practice, it is an impossible task – certainly for small scale project –to keep track of what the sellers of used equipment are doing to replace it or how the equipment replaced by the project activity is being used somewhere else in the economy. As a consequence, SSC type II methodologies are implicitly restricted to cases where new equipment is purchased and where the old equipment is scrapped. It is, in particular, the implementation of a scrapping scheme that can create a barrier for small-scale energy efficiency projects, and which, from an economic point of view, is often not reasonable, nor enforceable.

This provision on leakage is, in our view, misleading. In most developing countries there exist well functioning markets for used equipment, with a high supply elasticity because of a constant inflow of imports of old equipment from developed countries. Crowding in or crowding out effects are, therefore, highly unlikely to occur in practice. However, in the undesirable case where existing equipment of different efficiency is exchanged inside a company in order to benefit from the CDM, this would need to be considered in the additionality assessment of the project activity and thus is not a case for consideration of leakage.

Lack of an approved methodology for savings of non-renewable biomass

In particular, in least developed countries and in rural areas in the developing world, there is a considerable potential for energy savings through efficiency improvements in the use of non-renewable biomass. The most important

example so far is the replacement of inefficient cooking wood stoves with more efficient wood or renewable fuel stoves. In addition, there is potential for improving the efficiency with which firewood is used for heating. Such types of project activities have an outstanding performance in terms of sustainable development, contributing to decreased indoor pollution, reduction of deforestation rates, and resource savings among the poorest.

In our view it is of critical importance to make a SSC type II methodology available for these types of activities. We welcome the work done in this context by the Small-Scale Working Group of the Executive Board (draft version of AMS.II.G). We are, however, concerned by the counterfactual suggestion to use fossil fuels in more efficient stoves in the baseline scenario and not what is actually being replaced (namely non-renewable biomass in low-efficiency stoves). . Using the suggested default values this results in a baseline emission factor that is more than 70% lower than the *real* baseline emission factor for firewood, making most project activities unsustainable. Consequently the Executive Board in its 25th meeting couldn't agree on this proposal made by the Small-Scale Working Group.

In addition to this, the suggested consideration of leakage in draft AMS.II.G (use of saved non-renewable biomass by the project participants or by others or to justify other CDM projects) would create a major barrier for this type of projects. In many cases it will be difficult and very costly to exclude that, or to determine whether, firewood that was unsustainably harvested prior to project implementation is harvested by non-project participants after project implementation.

The introduction of this kind of leakage is also misleading from a methodological point of view. Only the presence of a supply constraint that non-project participants face would result in the compensatory harvesting of the saved non-renewable biomass and thus in compensating the emission reductions. Individual user's in rural areas will normally harvest the quantity of publicly available non-renewable biomass that they need to satisfy their consumption needs, and not increase their consumption (e.g. of wood for cooking) simply because more biomass becomes available due to the project.

There is, of course, the possibility that a project participant uses the saved biomass to increase energy generation; this is certainly more relevant for project activities targeting heating ovens than for those targeting cooking stoves. Considering this as a potential source of leakage corresponds to the unfortunate and unnecessary recent tendency to account for so-called "rebound effects" as leakage in CDM methodologies for large-scale energy efficiency project activities. In our view this is outside of the scope of the CDM modalities and procedures, as defined in the Marrakesh Accords, because it imposes restrictions on the use of the CDM for development purposes

It is our view that rebound effects should, in general, not be considered as leakage within CDM methodologies and, so far, this was common practice, for instance in electricity generation projects, where supply constraints are not considered. The concept of rebound effects is not part of the approved glossary of CDM terms. It contradicts one of the objective of the CDM, namely to contribute to sustainable development, and, in particular, paragraph 46 of the Modalities and Procedures for the CDM, which states that "the baseline may include a scenario where future anthropogenic emissions by sources are projected to rise above current levels, due to the specific circumstances of the host Party."

It would be of particular importance for energy efficiency projects to allow for a baseline that assumes the same output or service level that is achieved through the project activity. In the context of energy supply constraints and suppressed energy demand, which are prevalent in the economies of many developing countries, energy efficiency activities are often of the type "more output with given input" and not of the type "same output with less input". Not to allow for this development effect of energy efficiency projects would penalize many developing countries, contradict the objectives of the CDM and severely limit the use of the CDM to support energy efficiency projects.

Suggestions

In order to overcome the methodological barriers discussed above we suggest to:

(i) Increase the eligibility limit for SSC type II energy efficiency project activities from currently 15 GWh annual energy savings to 150 GWh annual energy savings.

(ii) Allow for CDM programs using approved methodologies for SSC project activities where the individual activities under the program of activities are identified ex post through monitoring and verification.

(iii) Drop the requirement to account for leakage due to crowding in or crowding out of used equipment.

(iv) Approve a SSC type II methodology for savings of non-renewable biomass that allows using the real baseline and the associate emission coefficient for firewood and that does not require considering the potential alternative use of the saved biomass as leakage.