Annex 2

GUIDANCE REGARDING METHODOLOGICAL ISSUES

A. Use of and/or reference to lifecycle analysis in proposed new methodololgies

1. When referring to and/or making use of lifecycle analysis (LCAs) and/or LCA tools, project participants shall in a transparent manner provide all equations, parameterizations and assumptions used in the LCA and/or LCA tools to calculate baseline and monitoring methodologies. For example, this could be accomplished by highlighting the relevant sections in an attached copy of the referenced LCA and/or tool.

B. OM/BM weighting in approved methodologies that use the combined margin approach

2. The baseline electricity emission factor in the approved consolidated baseline methodology ACM0002 (“Consolidated methodology for grid-connected electricity generation from renewable sources”and other related methodologies”) is calculated as the weighted average of the Operating Margin (OM) emission factor ($EF_{OM,y}$) and the Build Margin (BM) emission factor ($EF_{BM,y}$), i.e.

$EF_y = w_{OM} \cdot EF_{OM,y} + w_{BM} \cdot EF_{BM,y}$, where the weights w_{OM} and w_{BM}, are 50% by default.

3. The following guidance provides a number of project-specific and context-specific factors for developing alternative operating and build margin weights to the above default. It does not, however, provide specific algorithms to translate these factors into quantified weights, nor does it address all factors that might conceivably affect these weights. In this case, project particpants are suggested to propose specific quantification methods with justifications that are consistent with the guidance provided below. Given that it is unlikely that a project will impact either the OM or BM exclusively during the first crediting period, it is suggested that neither weight exceed 75% during the first crediting period.

Factor	Impact on weights	Further explanation
Project size (absolute or relative to the grid size of the system or the size of other system capacity additions)	No change in weight on basis of absolute or relative size alone	Alternative weights on the basis of absolute or relative project size *alone* do not appear to be justified. See paper prepared by Mr. Bruce Biewald for further discussion and explanation.[1]
Timing of project output	Can increase OM weight for highly off-peak projects; increase BM for highly on-peak projects.	Project activities with output during mainly off-peak periods (e.g. solar PV projects in evening peak regions, seasonal biomass generation during off-peak seasons) can have a greater OM weight , whereas projects with disproportionately high output during on-peak periods (e.g. air conditioning efficiency projects in some grids) can have greater BM weight.
Predictability of project output	Can increase OM for intermittent resources in some contexts.	Projects with output of an intermittent nature (e.g. wind or solar projects) which may have limited capacity value, depending on the nature of the

[1] Please refer to annex 7 of the seventeenth meeting of the Meth Panel at <http://cdm.unfccc.int/Panels/meth>.

		(wind/solar) resource and the grid in question, and to the extent that a project's capacity value is lower than that of a typical grid resource can reduce the BM weight. Potential adjustments to the OM/BM margin should take into account available methods in the technical literature for estimating capacity value.[2]
Suppressed demand	Can increase BM weight for the 1st crediting period.	Under conditions of suppressed demand that are expected to persist through over half of the first crediting period across a significant number of hours per year, available power plants are likely to be operated fully regardless of the CDM project, and thus the OM weight can be reduced.[3]
For **system management** (nature of local electricity markets, planning, and actors) and other considerations no guidance is available at present**.**		

C. Treatment of the lifetime of plants and equipment in proposed new baseline methodologies

4. Where a project activity involves the replacement or retrofit of existing equipment or facilities, project participants should take into account, consistent with the guidance by the CDM Executive Board, at its eighth meeting, regarding the treatment of "existing" and "newly built" facilities, that the existing equipment could have been replaced, retrofitted or modified in the absence of the project during the crediting periods. In this case, a baseline methodology should provide a methodological approach to assess whether the existing equipment would in the absence of the CDM be replaced and, if this is the case, to reflect this in the calculation of emission reductions the replacement, retrofit or modification of the equipment in the absence of the CDM.

5. For a number of project types, it is reasonable to assume that after replacement or retrofit of the existing equipment in the absence of the project activity, the emission level would be similar to that of that of the project activity.

6. In this case, emission reductions resulting from a specific equipment replacement shall only be accounted from the date of replacement until the point in time when the existing equipment would have been replaced in the absence of the project activity or the end of crediting period, whatever is earlier.

[2] Capacity value refers to the impact of a capacity addition on the capacity requirements of a grid system, often expressed as fraction of contribution to meeting peak demands relative to a conventional, dispatchable capacity addition or to a theoretical perfectly reliable one. Capacity value is dependent on both the characteristics of the project and the characteristics (and other power plants) of the grid system in question. Capacity value is typically expressed in terms of relative MW, whereas, for estimating emissions, we are concerned solely with MWh; thus, capacity value cannot be used directly as a BM/OM weight. Analyses of capacity value for intermittent resources can be found in a number of reports and in journals such as Energy Policy and the Electricity Journal.

[3] In other words, if, consistent with paragraph 46 of the CDM modalities and procedures, one assumes that electricity could otherwise be supplied to meet suppressed demand, this electricity would need to be provided by the construction and operation of new power plants, which is embodied in the build margin. In some cases, the reason for suppressed demand may be the inability to operate existing power plants, due, for example, to lack of spare parts or lack of availability or ability to pay for fuel. In such circumstances, the baseline scenario could represent the operation of these power plants, in which case the baseline emission factor should reflect their characteristics. This situation would likely require a new methodology.

7. In order to estimate the point in time when the existing equipment would need to be replaced in the absence of the CDM, a new methodology may consider the following approaches:

(a) A sector and/or activity specific method or criteria to determine when the equipment would be replaced or retrofitted in the absence of the CDM;

(b) The typical average technical lifetime of the type equipment may be determined and documented, taking into account common practices in the sector and country, e.g. based on industry surveys, statistics, technical literature, etc.;

(c) The practices of the responsible entity/project participants regarding replacement schedules may be evaluated and documented, e.g. based on historical replacement records for similar equipment.

8. The point in time when the existing equipment would need to be replaced in the absence of the project activity should be chosen in a conservative manner.

9. In case of project activities that involve several replacements or retrofits, project participants may consider, inter alia, the following generic approaches:

(a) Determination of the technical lifetime on a case-by-case basis, for each equipment or equipment type that is being replaced. This approach may be appropriate if different types of existing equipment are involved; or

(b) Assuming a conservative default technical lifetime for all equipment involved; or

(c) For projects involving a large number of individual equipment installations, methodologies may use a baseline that reflects the expected improvements in emission characteristics (for the equipment type within the sector or industry in question) as a result of replacements or retrofits of equipment in the absence of the project activity.

D. Consideration of uncertainties when using sampling

10. Methodologies employing sampling to derive parameters in estimating emissions reductions shall quantify these parameter uncertainties at the 95% confidence level. In addition, the choice of the upper or lower bounds to be used in estimating emission reductions shall be conducted in a manner that ensures conservativeness.

E. Inclusion / exclusion of emission sources in baseline and monitoring methodologies

11. When defining which emission sources should be considered in the project boundary, in the baseline scenario and in the calculation of leakage emissions, project participants should make conservative assumptions, for example the magnitude of emission sources omitted in the calculation of project emissions and leakage effects (if positive) should be equal to or less than the magnitude of emission sources omitted in the calculation of baseline emissions.