

 <p style="text-align: center;">CDM: Proposed New Methodology Meth Panel recommendation to the Executive Board (version 04) <i>(To be used by the Meth Panel to make a recommendation to the Board regarding a proposed new methodology)</i></p>	
Date of Meth Panel meeting:	4 - 8 April 2005
Related F-CDM-NM document ID number (electronically available to EB members)	F-CDM-NM0072: "Mandatory Energy Efficiency Standard for Room Air Conditioners in Ghana"
Related F-CDM-NMex document ID number(s) (electronically available to EB members)	F-CDM-Nmex0072: Thomas / Anderson
Related F-CDM-NMpu document ID number(s) (electronically available to EB members)	F-CDM-NMpu0072: Bittencourt
<p><i>Note to those completing this form, as applicable: Please provide recommendations on the proposed new baseline and monitoring methodologies based on an assessment of CDM-NMB and CDM-NMM and of their application in sections A to E of the draft CDM-PDD, desk reviews and public input. Please ensure that the form is entirely filled and that arguments and expert judgements are substantiated.</i></p>	
A. Preliminary recommendations by the Meth Panel	
I. Recommendation on the proposed new baseline methodology: (checkmark the choice made)	
Title of proposed new baseline methodology:>> Energy Efficiency Through Mandatory National-Level Appliance Standards	
<p>a. To approve this proposed methodology with minor changes</p> <p><input type="checkbox"/></p> <p>i. Conditions under which this proposed methodology is applicable to other potential CDM project activities (e.g. project type, region, data availability):</p> <p>>></p> <p>ii. Minor changes:</p> <p>>></p>	
<p>b. To reconsider this proposed methodology, subject to required changes</p> <p><input checked="" type="checkbox"/></p> <p>i. Conditions under which the proposed methodology is applicable to other potential projects (e.g. project type, region, data availability):</p> <p>>></p> <ol style="list-style-type: none"> 1) In countries/regions where no mandatory energy efficiency standard for the proposed appliance exists; 2) In countries/regions where there is an existing standard for specific appliances but technology improvements allows for an increase in the standard; 3) In countries/regions where it can be demonstrated by the project developer that the standard is put in place as a result of the CDM credits; 4) Where there are available national level, industry data and where survey data can be gathered on efficiency, sales and use of the relevant equipment; 5) Where adequate data exist on the population of the equipment in the country. 	

ii. Required changes:

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- 1) Change the reference to the tool used for establishing the additionality of the project to "Tool for the demonstration and assessment of additionality";
- 2) The proposed method should include a procedure to identify possible baseline scenarios candidates;
- 3) There is a need to re-write carefully emission reduction calculation equation sections in this new method. The following are some of the changes to be effected:
 - For more clarity, the formulas should be properly numbered;
 - Although the analytical framework of the equations is straight forward, wrong use of analytical nomenclature for example where the symbol Σ for summation should be used, S was used. In the same token careful check should be carried out on the correctness of some of the formulas, for example, what is "x-1?b" ?
 - Some of the variables in the equations are not defined or not correctly defined.
- 4) There is a need to provide more information on the appropriateness of 50% as a default value of "percentage of average yearly user hours utilized by equipment bought in a particular year" and for which years it will be applied;
- 5) Given the characteristics of the project type (National Policy Oriented Project) project participants are encouraged to suggest further details on how to implement the "Tool for determination and assessment of additionality" with regard to specific project type covered by this proposed methodology;
- 6) There will be a need to expressly re-consider the use of a static average retirement age of equipment, as this may change over time given the policy framework;
- 7) The way the emission reduction calculation is currently designed implies that the relevant energy of focus here is electrical energy. If this proposed method is to be utilized for standards covering other energy efficiency standards apart from electrical energy, there will be a need for a broader design of the equations to cover other energy forms. If this is not done, then the proposed new methodology should be restricted to standards covering electrical energy consuming equipment and the methodology title and the conditions for applicability must be corrected to restrict the method to electrical energy consuming equipment;
- 8) Where the ACM0002 is to be used for the determination of avoided emissions through the combined margin approach, method to show that this method is applicable to energy efficiency project should be included in the baseline methodology;
- 9) Since sample surveys will form a main source of data for the implementation, monitoring and enforcement of the standard, the new methodology should lay more emphasis on the scientific methods acceptable for the surveys;
- 10) Project participants may note that the Meth panel has requested further guidance from the Executive Board with regards to the treatment of the type of project activity covered by this methodology (please refer to the report of the fifteenth meeting of the Meth Panel).

(Project participants shall make required changes to the proposed new methodology and send it back to the Meth Panel. The proposed new methodology will be reconsidered by the Meth Panel if changes required are made by the project participants. The Executive Board will only consider this proposed new methodology after the revised proposed methodology has been reconsidered by the Meth Panel.)

- c. Not to approve the proposed methodology

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- i. Reasons for non-approval:

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(A new proposal should be submitted in accordance with the procedures for submission and consideration of proposed new methodologies of the Executive Board.)

II. Recommendation on the proposed new monitoring methodology: (checkmark the choice made)

Title of proposed new monitoring methodology: >> [Energy Efficiency through Mandatory National-Level Appliance Standards](#)

- a. To approve this proposed methodology with minor changes

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- i. Conditions under which methodology is applicable to other potential projects (e.g. project type, region, data availability):

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- ii. Minor changes:

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- b. To reconsider this proposed methodology, subjected to required changes

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- i. Conditions under which the proposed methodology is applicable to other potential projects (e.g. project type, region, data availability.):

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- 1) [In countries/regions where no mandatory energy efficiency standard for the proposed appliance exists;](#)
- 2) [In countries/regions where there is an existing standard for specific appliances but technology improvements allows for an increase in the standard;](#)
- 3) [In countries/regions where it can be demonstrated by the project developer that the standard is put in place as a result of the CDM credits;](#)
- 4) [Where there are available national level, industry data and where survey data can be gathered on efficiency, sales and use of the relevant equipment;](#)
- 5) [Where adequate data exist on the population of the equipment in the country.](#)

- ii. Required changes:

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- 1) [Numbering of monitoring variables in Tables B2.1 and B2.3 regarding monitoring protocols for baseline and project emission calculations should be revamped to reduce confusion in use;](#)
- 2) [Other variables that must be monitored when the changes required for the baseline methods is introduced should be included in the protocol;](#)
- 3) [Power consumption in the manufacture of the appliances before the introduction of the standards and after should be monitored to elucidate whether or not leakages from this source exist;](#)
- 4) [The write-up on the monitoring methodology should be revamped and made distinct from the baseline write-up to accentuate its unique importance in the efficacy of the method;](#)
- 5) [Data that will be collected from scientific survey should be reflected as such in the monitoring table;](#)
- 6) [The time frequency of such surveys should be firmly established in the monitoring methodology.](#)

(Project participants shall make required changes in the proposed new methodology and send it back to the Meth Panel. The proposed new methodology will be reconsidered by the Meth Panel if changes required are correctly made by the project participants. The Executive Board will only consider this proposed new methodology after required changes proposed have been made and the revised proposed methodology has been reconsidered by the Meth Panel.)

c. Not to approve the proposed methodology



i. Reasons for non-approval:

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(A new proposal should be submitted in accordance with the procedures for submission and consideration of proposed new methodologies of the Executive Board.)

B. Details of the evaluation of the proposed new methodology by the Meth Panel:

I. Proposed new baseline methodology (specify title here): >> [Energy Efficiency through Mandatory National-Level Appliance Standards](#)

(1) Short description of the methodology, including an assessment of which approach from paragraph 48 of the CDM modalities and procedures was used:

a) Describe the methodology:

>> Appliances such as air conditioners, refrigerators, lighting, motors, and many others are growing in popularity throughout the developing world. As more consumers are able to make purchases of these energy-consuming appliances, national power grids and fuel suppliers are asked to provide more service often increasing CO₂ emissions. In very general terms, more efficient products may have a slightly higher initial purchase cost, but lower operating costs. Because the market place is imperfect and consumers are often unaware that they might be ‘paying more by paying less’ governments, particularly in the developed world, have enacted appliance standards to force manufacturers to provide consumers more efficient products, thus increasing the average efficiency of the pool of appliances in use. The standard benefits consumers by giving them appliances that will cost them less over the life of the product and it benefits society by helping to limit energy demand reducing the need for expensive additional power plants with the associated pollution. The developing world as a whole has been much less able to take advantage of the benefits of energy efficiency standards for appliances. Since the developed world has appliance standards, the developing world is often the ‘dumping grounds’ for the most inefficient appliances that can no longer be sold in places like Europe or Japan. This is due in part to the high transaction costs of creating a mandatory appliance standard. Implementing a standard usually requires access to appliance testing labs to certify appliances, detailed analysis of the optimal standard to impose, and some degree of cooperation from the manufactures. Additionally, in most cases there are potential losers along with the potential winners who try to disrupt efforts. Implementing an appliance standard – as with any policy – is a political process and few countries in the developing world have been able to implement one. The baseline is determined by calculating the amount of energy, which appliances would have consumed without the standard. Annual data on new appliance population and use is calculated. This data is then combined with the pre-standard average efficiency rating of the appliance adjusted by a business as usual annual efficiency improvement. This is compared to the existing situation using the post standard average efficiency rating of the appliance. The resulting energy savings are then converted to CO₂ savings using IPCC data for appliances that directly consume fuel or a combined margin approach that can most accurately depict the emission reduction impact of reducing the electricity consumption on the grid. Like with a renewable energy project, energy efficiency will allow existing generation plants to produce less electricity with the most expensive operational plants being the first to reduce output and fewer generation plants will have to be built in the future which would likely be of similar composition to the most recent plants built. The project will use the Executive Board’s proposed additionality tool to determine that the project would not have occurred without CDM. The tests including a review of potential alternatives, a financial or barriers

additionality test, and a common practice test will make the case for why CDM is required to make this project happen.

b) State the approach selected:

>> The proposed approach is as per paragraph 48 (a) of the CDM modalities and procedures: "Existing actual or historical emissions, as applicable".

c) Indicate (in summary form) why the approach selected is the most appropriate. Please provide your expert judgement on the appropriateness of the selected approach to the project category:

>> The energy consumption of the population of the given appliance before the standard will be compared to the total energy consumption of the population of the given appliance after the mandatory energy efficiency standard is put in place. Option two is inappropriate since standard will not advocate one particular technology, but instead will just mandate an increase in average energy efficiency within the population of the sales of that appliance. Option three is inappropriate since in many cases this will be the first project of its kind in a country with nothing to compare it to.

(2) Basis for determining the baseline scenario:

a) State whether the documentation explains how the baseline scenario is to be chosen and identified:

>> The documentation does not adequately explain how robust baseline scenarios are to be identified and the eventual baseline chosen.

b) State the basic underlying rationale for algorithms/formulae used (e.g. marginal vs. average basis) (see also section 4 below):

>> The first step is to determine what the energy use of baseline appliances would have been, and their carbon emissions implications. Second step will be to calculate the energy use of the appliances after the introduction of the standards. This will require the monitoring of factors such as data from appliance use following introduction of the standard, where corrections are made for the difference between new efficiencies and the assumed efficiencies under the baseline - with assumptions made that the total sales and amount of use of new and baseline equipment would be similar. The methodology as currently presented implicitly assumes that the energy under consideration is electrical energy and utilizes the combined margin approach to determining the emissions factor of avoided electricity use, reasoning that saved electricity will affect electricity use much as introduction of a new renewable energy supply source would do. It includes the documentation from AMC0002 version 1 (without reference, it should be pointed out - this would be helpful for tracking future versions of that document), "Consolidated baseline methodology for grid-connected electricity generation from renewable sources." This seems a reasonable approach. It must be noted that AMC0002, under the heading 'applicability,' states that it is 'applicable to grid-connected renewable power activities' and notes that it applies to 'capacity additions.'

c) State whether the documentation explains how, through the use of the methodology, it can be demonstrated that a project activity is additional and therefore not the baseline scenario. If so, what are the tools provided by the project participants?

>> The documentation explained the methodology that will be used to demonstrate that a project activity is additional and not the baseline scenario. The method used for this purpose is the CDM Executive Board "Tool for the demonstration and assessment of additionality". It does this by showing that the proposed new energy efficiency standards would not be implemented without the revenues generated by the CERs.

d) State whether the basis for determining the baseline scenario and for assessing additionality is appropriate and adequate:

>> As pointed out in the section where required changes were elucidated, the basis for determining baseline scenarios and for choosing the baseline is ad-hoc and can be developed more robustly. The application of the "Tool for the demonstration and assessment of additionality" is appropriate and adequate.

(3) Assessment of the description of the proposed methodology and its applicability

a) State whether the methodology has been described in an adequate manner:

>> The methodology has not been described in a very adequate manner. Most especially, a lot of cleaning up is required in the presentation of one of the most important components, the equations for estimating emissions. The nomenclature, the indexing and symbols needs extensive revamping for it to be easily used by others. In general however, the logic of the equations are sound.

b) State whether the proposed methodology is appropriate for the referred proposed project activity and the referred project context (described in Sections A - E of the draft CDM-PDD and submitted along with CDM-NMB):

>> The proposed methodology is appropriate for the referred proposal project activity and the project context.

c) State whether the application of the methodology could result in a baseline scenario that reasonably represents the anthropogenic emissions by sources of greenhouse gases that would occur in the absence of the proposed project activity.

>> Yes, the application of the methodology could result in a baseline scenario that reasonably represents the anthropogenic emissions by sources of GHGs which would occur in the absence of the proposed project activity.

Please explain:

>> The method develops a baseline that describes an average efficiency of a technology before energy standard is implemented. It utilizes measured data and those compiled from carefully implemented sampling surveys, which are expected to follow existing good practice criteria to ensure conservativeness and transparency. Although the methodology involves some key assumptions, the main factor in the accuracy of the results of the baseline calculations will be the quality of data utilized. As long as the data are reasonably accurate and reliable, the methodology should yield good estimate of the potential emission reduction.

(4) Assessment of algorithms/formulae and type of data needed:

a) State whether the description of the methodology includes algorithms and generic formulae that can be applied to other potential project activities (if not, the proposed new methodology will be considered as a project-specific methodology):

>> As currently conceptualised, the description of the methodology includes algorithms and generic formulae that can be applied to other potential project activities as long as the standard introduced involve electrical energy powered appliances.

b) Explain the spatial scope of data used to determine the baseline and whether the scope is appropriate:

>> The spatial scope of the data used to determine the baseline will have to be national, especially as regards the jurisdiction of the enforcement of the national standard. The national scope will also determine the applicable grid to be used.

c) Explain the vintage of data used (in relation to the duration of the project crediting period) and whether the vintage of data is appropriate, indicating the period covered by the data:

>> At least three years of local data collected before the project starts (or the standard takes effect) should be available in order to calculate the historical annual improvement of the efficiency and the average retirement age of the appliance population during the project-crediting period. If this data is not available, then a conservative estimate should be made based on the experiences of countries or regions that have implemented similar energy efficiency standards. Furthermore, there are annual updates of sales and use data of new equipment, which is assumed to be the same for baseline equipment.

(5) Definition of the project boundary related to the baseline methodology:

a) State how the project boundary is defined in terms of:

i) Gases and sources

>> CO₂ from fossil fuel combustion in grid power plants only.

ii) Physical delineation

>> National in the case of appliances and national or regional in the case of the electricity grid.

b) Indicate whether this project boundary is appropriate:

>> The appliances physical delineation is national as it is within this framework unhindered enforcement of the standards can be seamlessly guaranteed. Grid delineation can however be regional if there are grid interlinkages in the region covering a minimum of two national boundaries.

(6) Key assumptions/parameters (including emission factors and activity levels) and data sources:

a) List the implicit and explicit key assumptions. Identify those, if any, which are problematic and explain:

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- Sample data and statistics will be available;
- The statistics will be accurate and if necessary interchangeable;
- New appliances purchase during the year of crediting will operate at least 50% of the year;
- The same number of appliances will be purchased each year following the introduction of the standard as would have been under the baseline;
- No leakages are expected to occur;
- The approved ACM0002 methodology, which was developed, for capacity addition projects involving renewable energy systems is also applicable for energy efficiency improvement projects.

b) State whether the key assumptions are arrived at in a transparent manner:

>> Most of the assumptions are derived in a transparent manner. More information regarding why 50% was selected as the cut off point for average operating hours of the technology would be useful. It appears to be a random cut off point.

The method incorporates the CDM Executive Board approved ACM0002 methodology for calculating the operating margin emission factor, the build margin emission factor and on their basis the baseline emission factor; however this methodology was developed for renewable energy sources. Further justification of why the methodology is appropriate for non-renewable energy efficiency measures would increase transparency and understanding of the proposed new methodology.

c) Give your expert judgement on whether the assumptions/parameters are adequate:

>> In general the assumptions are adequate, however some additional information (see b above) would be useful for increasing transparency.

d) Indicate which data sources are used and how the data are obtained (e.g. official statistics, expert judgement):

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- Electricity emissions factor (calculated from best available official statistics, scientific studies, etc.)
- Fuel emissions factor (from IPCC sources)
- Total annual population of new appliance (from official government and industry statistics and/or scientifically derived sampling data)
- New appliance sales data by equipment model and efficiency (from official government and industry)

statistics and/or scientifically derived sampling data)

- Average energy input of new appliance population- may require additional data to determine such as average size/capacity/output and efficiency rate per unit of output to determine (from official government and industry statistics and/or scientifically derived sampling data)
- Testing lab results for new equipment efficiency (from official government and industry statistics and/or scientifically derived sampling data)
- Average retirement age of equipment (from official government and industry statistics and/or scientifically derived sampling data)
- Mean user days (from official government and industry statistics and/or scientifically derived sampling data)
- Mean user hours per day (from official government and industry statistics and/or scientifically derived sampling data)
- Historical improvements in new appliance population efficiency (from official government and industry statistics and/or scientifically derived sampling data).

e) Give your expert judgement on whether the data used are adequate, consistent, accurate and reliable:

>> The data defined build on standard sampling practice, the information required within ACM0002, and the approved tool for additionality. The data requirements are adequate but further justification for using the methods in ACM0002 would increase transparency and consistency, since the methodology was developed for renewable energy projects and not energy efficiency projects. The quality of the data can of course vary according to different countries and therefore it is very important that sampling meets the standards described in the method.

f) State possible data gaps:

>> It is recommended that the number of samples is specified to improve the accuracy and conservativeness of data collected. Justification for the number of samples required should also be provided.

(7) Assessment of uncertainties:

a) State whether the methodology includes an assessment of uncertainties regarding:

i) The basis for determining the baseline scenario:

>> Determination of the baseline scenarios in the proposed new method is very ad-hoc and as such it does not cover explicitly assessment of uncertainties.

ii) Algorithms/formulae:

>> Not explicitly considered.

iii) Key assumptions:

>> The methodology does not include an assessment of uncertainties regarding key assumptions.

iv) Data:

>> There is a short discussion on uncertainties surrounding data gathering, where it was stated that a third party Consultant or help from the DOE might be necessary. Uncertainties regarding the availability of data are addressed and alternatives provided if data is missing.

b) State whether the uncertainties presented are reasonable:

>> The uncertainties presented are reasonable in some cases but there are scope for improvement.

(8) Leakage:

a) *State how the baseline methodology addresses any potential leakage due to the project activity:*

>> It is assumed that there will be no leakage.

b) *Indicate whether the treatment for leakage is appropriate and adequate:*

>> Although the method assumes zero leakage, it however acknowledged that if more energy is used to produce or deliver a more efficient technology than a less-efficient model, there could be leakage. It is recommended that the methodology be revised to accommodate this situation. i.e. if a new technology does require more energy than a less efficient model, this should be accounted for.

(9) Transparency and “conservativeness”:

a) *Indicate whether the baseline methodology was developed in a transparent way:*

>> The baseline methodology has been developed in a transparent way.

b) *State whether the baseline methodology is conservative:*

>> The methodology incorporates techniques to ensure conservativeness (e.g. annual revision of the carbon emissions factor to account for real technology population and revisions to account for technology improvements over time), however conservativeness of the method could be improved if the minimum number of samples that can be used for the data is specified so as to ensure conservativeness and accuracy of the results.

Transparency would be improved if further justification was provided for the cut off point of 50% of average operating hours and additionally for why the methods within ACM0002 are applicable to energy efficiency projects.

(10) Potential strengths and weaknesses of the proposed baseline methodology (please explain):

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Strengths:

- Applicability to a wide range of appliances, and the possibility that this opens up a new methodology encouraging the adoption of improved appliance standards in the developing world;
- Provided data is available, the methodology is easy to apply and applicable across countries, regions and different technologies.

Weaknesses:

- The method relies on data or scientific sample survey that can be expensive or difficult to implement.
- The method incorporates the CDM Executive Board approved ACM0002 method for calculating the operating margin emission factor, the build margin emission factor and the baseline emission factor however this method was developed for renewable energy sources and lack of clarification of why the method is appropriate for non-renewable energy efficiency measures is a weakness.
- The method does not clearly define what project emissions should be measured, although it is presumed that this will be the same as for the baseline.
- The method requires that the technologies are used for at least 50% of average operating hours. The 50% cut off point appears to be entirely random. Clarification of why 50% is selected would be useful.
- The method does not account for leakage even though it is acknowledged that if more energy is used to produce or deliver a more efficient technology than a less-efficient model, there could be leakage. It is recommended therefore that the method is revised so as to accommodate this situation. i.e. if a new technology does require more energy than a less efficient model, this should be accounted for.

(11) Other considerations, such as a description of how national and/or sectoral policies and circumstances have been taken into account (please explain):

>> There has been no discussion of this kind of project to date, and it is therefore a matter for further discussion by the EB as to whether it is applicable to the CDM. The baseline methodology notes that "implementing an appliance standard - as with any policy - is a political process," and indeed as we enter into politics, project finance considerations gets weaker and issues to be handled gets tougher. The methodology simply reproduces the draft additionality tool and doesn't discuss it further, but the draft CDM-PDD tries to pin down a particular aspect of the "political process" that can be recognized as the barrier to the policy that can be measured and can be facilitated with CDM funding. This is the appliance standards measurement laboratory. However, it seems somewhat arbitrary that this is chosen as the barrier given there is a wide range of other costs involved, such as assembling the data, holding stakeholder meetings to decide the standard, etc. The fact is that a wide range of costs are assumed by government for the passage and maintenance of a required standard, and it is somewhat of a stretch to pin down the point at which government funding is unable to extend to a particular activity. In any case, this is a discussion to be had by the EB. That passing such standards costs money and that doing so is an exceptionally good idea there can be no doubt.

As stated in the Ghana draft CDM-PDD, "There is a national drive to achieve a comprehensive energy efficient economy. The main hurdles have been the development of appropriate regulations, policies, uneconomic tariffs, and availability of financial resources."

(12) Applicability of the proposed methodology across project types and regions (please indicate):

>> The methodology is applicable to any country or national boundary that wishes to implement an energy efficiency standard but has not been able to do so due to barriers to implementation. The method will be appropriate for any energy efficiency standard and is thus not project specific or region specific. The proposed methodology can be applicable to a wide range of efficiency standard improvements in unitary equipment, in a wide range of countries.

(13) Any other comments:

a) State whether any other source of information (i.e. other than documentation on this proposed methodology available on the UNFCCC CDM web site) has been used by you in evaluating this methodology. If so, please provide specific references:

>> Consolidated methodology for grid-connected electricity generation from renewable sources (ACM0002) and "Tool for the demonstration and assessment of additionality".

b) Indicate any further comments:

>>No further comments.

II. Proposed new monitoring methodology (specify title here): >> Energy Efficiency through Mandatory National-Level Appliance Standards

In respect of the proposed new monitoring methodology, evaluate each section of CDM-NMM to the draft CDM-PDD. Please provide your comments section by section:

(1) Brief description of new methodology:

Describe new methodology:

>>The methodology describes the data necessary to apply the corresponding baseline methodology. There are two main sets of data: one about the emissions factor of the electrical grid (or the fuel, when not grid-connected) determined using the combined margin approaches under ACM0002, and the second about the number and use of appliances affected by the standard.

(2) Key assumptions/parameters:

a) List the implicit and explicit key assumptions. Identify those, if any, which are problematic and explain:

>>

Explicit Assumptions:

- Accuracy of IPCC emissions factors for the case of direct fuel use;
- Accuracy, relevance and conservative interpretation of data from the sampling plan;
- Assumption that appliances are used 50% of a year in the final year of calculation;
- No leakage.

Implicit Assumptions:

- Availability of national data for calculating emissions factor,;
- Availability of data from a sampling plan;
- Existence of a sampling plan (this is not discussed in the methodology).

b) State whether the key assumptions are arrived at in a transparent manner:

>> There could be more discussion of the nature of the data, the reliability, the nature of the sampling plan, etc. Otherwise the assumptions are straightforward.

c) Give your expert judgement on whether the assumptions/parameters are adequate:

>> The assumption that the publicly available data is accurate and reliable is not always adequate. It is therefore recommended that the project developer is always required to undertake a random sample of the population to assess the accuracy of the data and/or additional statistical tests of error are defined.

(3) Data sources and data quality:

a) Indicate which data sources are used and how the data are obtained (e.g. official statistics, expert judgement):

>> Three primary sources: official government statistics, industry data, and scientifically derived sampling data.

b) Give your expert judgement on whether the data used are adequate, consistent, accurate and reliable:

>> All projects should be required to implement scientific sampling to ensure the accuracy of the public data used this will improve the accuracy of the data.

c) State possible data gaps:

>> Specific examples are difficult to provide but data gaps will exist where data sources are unavailable or where they are available but unreliable.

(4) Assessment of the description of the proposed methodology and its applicability:

a) State whether the proposed methodology has been described in an adequate manner:

>> No. The methodology description given in the document is simply the same as the one in the baseline methodology, and as such both includes unnecessary information about calculating baseline emissions, and leaves out crucial information about the methods for gaining the data required in the tables. There should be far more extensive discussion of how one goes about getting the data. There are three sources: government and industry statistics, and scientifically derived sampling data. There should be a discussion of whether the first two are regularly available for the data in question, to begin with. The most important gap, however, is the near complete neglect of detailing the heart of the monitoring methodology; the 'scientifically derived sampling data'. There is only the third bullet point on page 3 to give us any information. The rest of the methodology simply reproduces lists of needed data from AM0002, and those obvious for the calculation of the baseline. But how to obtain them really is what needs discussion, after all

this is the monitoring methodology - the rest is just tables and calculations. How does one do a survey? It's surely worth at least a couple of pages of explanation. That there is mention of the fact that such a methodology has been done elsewhere and is based on CLASP and LBL work, but without further references. CLASP has a guidebook to labelling and appliance standards but it covers a lot of ground and doesn't provide the detail necessary to actually design a survey instrument and prepare a monitoring plan. Therefore either more information is in this methodology, or a reference to a publicly available methodology should be provided.

b) State whether the proposed methodology is appropriate for the referred proposed project activity and the referred project context (described in Sections A - E of the draft CDM-PDD and submitted along with CDM-NMM):

> It is appropriate.

c) State whether this proposed monitoring methodology is compatible with the proposed baseline methodology described in CDM-NMB of the draft CDM-PDD:

>> Yes it is compatible with the proposed baseline methodology described in CDM-NMB of the draft CDM-PDD.

(5) Leakage (please elaborate, if appropriate):

>> Not monitored because no leakage is expected.

(6) Quality assurance and control procedures (please explain):

>> There are none: it assumes that the data for the emissions factors are reliable, coming from IPCC standards or government/ industry official statistics. It further assumes that survey data are accurate because QA/QC will be built into the survey design. This is an instance of this methodology thinking of the survey as something external to the methodology, whereas it in fact a major part of the methodology. Thus quality control should be discussed just as the whole survey design should be.

(7) Potential strengths and weaknesses of the proposed monitoring methodology (please explain):

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Strength:

- Simple approach using proven quantification methods developed by the leading experts in Appliance standards.

Weaknesses:

- Quality assurance and control measures are not defined.
- Relies on availability of data and/or scientific surveys that can be difficult and/or expensive to obtain. Both the baseline and the monitoring methodology may rely on statistical sampling as it may be impossible to monitor the performance of every appliance in the market.
- Little precedence with approved methodologies. This is a relatively unique methodology that is not able to borrow heavily from already approved methodologies.
- Long term activity- Developing of a national level Appliance standard has traditionally required a tremendous investment of time and resources. Project developers will need to work jointly with key government, industry and NGO groups to move projects forward. The project may require extensive sampling surveys of both the efficiency levels of proposed appliances and the typical hours of use by consumers. The project would also likely require extensive long-term discussions with stakeholders and policy makers to determine what the standard should be.
- The method does not account for leakage even though it is acknowledged that if more energy is used to produce or deliver a more efficient technology than a less-efficient model, there could be leakage. It is recommended therefore that the method is revised so as to accommodate this situation. i.e. if a new technology does require more energy than a less efficient model, this should be accounted for.

(8) Applicability of the proposed methodology across project types and regions *(please indicate):*

>> The proposed methodology is applicable for different technologies defined in the new standard. It is applicable to different regions and different project types.

(9) Any other comments:

a) State whether any other source of information (i.e. other than documentation on this proposed methodology available on the UNFCCC CDM web site) has been used by you in evaluating this methodology. If so, please provide specific references:

>> None.

b) Indicate any further comments:

>> No further comments.

Signature of Meth Panel Chair

Date: 15/04/2005

(Jean-Jacques Becker)



Signature of Meth Panel Vice-Chair

Date: 15/04/2005

(José Miguez)

Information to be completed by the secretariat

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