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From leo.perkowski@pd-forum.net  
Date 04 August 2010  
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Subject **Call for public inputs: Draft "Consolidated methodology for electricity and heat generation from biomass residues"**

Dear Mr. Mahlung,

Honourable Members of the CDM Executive Board,

Following the call for public inputs on the draft "Consolidated methodology for electricity and heat generation from biomass residues" the members of the PD-Forum would like to express our appreciation on this pro-active attempt of broadening the applicability of the recent ACM0006.

The PD-Forum would like to provide constructive inputs of both a general and specific nature for this draft consolidated methodology which are attached as two annexes to this cover letter.

Thank you for the opportunity to comment on the draft methodology. We are available to provide further comments or clarifications at any time during your deliberations.

Kind regards,



Leo S. Perkowski  
Co Vice Chair  
Project Developer Forum

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### **Annex 1 – General comments**

- The replacement of an existing consolidated methodology by a new one is considered as a unique, new exercise, which will require specific care considering
  - the amount of projects which are still under validation using ACM0006
  - the extent of changes compared to ACM0006 and the resulting work-load if those changes would be requested to be implemented in PDDs which are already in validation
  - the need for input data, which was not required by ACM0006
- It is not clear how approved methodologies consolidated to form ACM0006 (AM0004 and AM0015) were taken into account in the proposal. Actually, apparently they were not.
- The inclusion of an additionality test in the methodology (rather than using the combined tool) and, in particular, the option of using a financial benchmark when a baseline alternative which does not involve any investment by the project participants, is welcomed.
- Most of the effort made by the meth panel was concentrated on eliminating the “scenarios-approach” previously used and little effort in the simplification and actual deconsolidation, although this was originally considered as main objective. The draft is still very complex and tries to include all scenarios from the old ACM0006 versions in a single methodology. Complex methodologies are usually difficult to revise. Even minor changes are difficult to be approved by the Meth Panel due to the fact that Meth Panel members have limited time to assess the requests but it is very difficult to quickly evaluate the impacts of changes in the whole methodology.
- But, if in contrary to the initial idea of a deconsolidation, now, every kind of biomass utilization for the generation of electricity and heat by large installations should be covered within a single methodology, we recommend consolidating also with AM0042, which only adds one further aspect (biomass from dedicated plantations).
- The new methodology, as per ACM0006, contains a footnote saying that “Further work is undertaken to investigate to which extent and in which cases methane emissions may occur from stock-piling biomass residues. Subject to further insights on this issue, the methodology may be revised” meaning that currently baseline methane emissions cannot be claimed for stockpiled biomass residues. This is an issue for many developing countries which have a lack of managed landfill facilities. Baseline emissions from this source can be claimed in the relevant small scale methodologies. Perhaps it would be useful therefore to ask the Secretariat to use this opportunity of a new methodology to consider this issue and make the small scale and large scale methodologies consistent.
- The need to provide comprehensive historic input parameter when applied at existing installations will limit the applicability especially in less developed countries (and facilities) and therefore contradicts the goal as set out in the CMP5 decisions. Such a demand on monitored historic data will disable all activities at sites where such equipment was never installed due to economic constraints or a missing technical necessity and therefore will give advantage to installations which do already operate at advanced conditions.
- Similarly like in the recent situation with ACM0008 unexpected demands on the reporting of parameter, which are not delivering valuable additional information, might arise due to the complexity of the methodology. Thus it should be clear which parameters are required under which circumstances or at least a list should be requested in each PDD which parameters are required.
- The methodology is very complex, with numerous detailed demands about the baseline scenario, making any anticipation of how easy or difficult it will be to use it almost impossible. A few examples of its application in registered projects would perhaps facilitate its understanding.

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### **Annex 2 – Specific technical issues**

- **Definitions:**  
"Dry biomass" is not defined. Under the aspect that dry biomass can have various definitions it should either be specified what this means under this meth or that the PP has to specify it in the PDD.
- **Definitions:**  
The term "heat header" is not defined. Please see e.g. page 2, last sentence in the definition of "Power plant".
- **Definitions:**  
Misleading definition in "power plant" and "power plant only". The choice of word "heat engines (e.g. turbines or motors)" as a general term for devices transforming thermal energy into mechanical energy may lead to misunderstandings.
- **Applicability condition (3), page 3:**  
It should be emphasized (e.g. in a footnote) that this does not address unused capacities, i.e. that production may increase above the historic level in case the production capacity has already been available.
- **Spatial extent of project boundaries, bullet point 1, page 4:**  
The inclusion of all generation equipment might become problems in case of any future changes in complex systems. As consequence changes might be considered to require a notification / approval of activity changes, even if there is no impact on the operation and monitoring of the project activity. DOEs will require clear guidance how to deal with such changes.
- **Reference plant, second and third bullet point, page 5:**  
There are a lot of details required for the installation (type and capacity of the heat generators, heat engines, electric power generators, types and quantities of fuels which would be used on each heat generator, average amounts of electricity and heat import) that would be installed in the absence of the project activity. Such details are frequently not available as comparisons of baseline and project activity scenarios (at the time of investment decision) are usually made at qualitative level. Such detailed information is usually available only after the choice of project configuration is made. For that reason the discussion should be constrained to the general aspects of power & heat generation and biomass use and the discussion of the exact definition of the baseline plant configuration, which may frequently be subjective (the same problem is faced today with ACM0006 and the reference scenario), should be avoided.
- **Alternative scenarios for electric power, P2 and P3, page 8:**  
As written under the fourth bullet point herein, there is no clear advice under which of the two scenarios an increasing utilisation of an existing plant with an installed capacity higher than historically is required.
- **Alternative scenarios P2, P3, H2, H3; pages 8/9:**  
The use of historic average load factors, energy efficiencies etc. has to take into account that projects using biomass residues from production processes are subject to weather variations that may significantly affect the availability of inputs. In such cases it would be preferable to work with historical upper bounds (or design variables).
- **Biomass residues categories, page 11:**  
It is written that "along the crediting period, new categories of biomass can be used" by adding a new line to the table. It is recommended to express that no approval of a new monitoring plan is required in such a case.

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- Procedures to demonstrate that B1, B2, B3 are realistic and credible scenarios, top of page 12:  
 There is steady discussion with DOEs whether the fact that biomass is left on fields for decay could be considered as means of fertilisation. It is recommended to give advice within the methodology, e.g. by giving a definition of "controlled fertilization" within the belonging section at the beginning of the meth.
- Assessment of relevant scenarios, page 12, last paragraph:  
 The procedure is similar to the common practice analysis (step 4) but at step 1a sets up a sectoral based approach. The procedure increases subjectivity in the in the selection of alternative scenarios (how exactly will the "overview" be used?). Furthermore identifying 10 facilities with similar output might in many cases end up in a single technology which reflects the prevailing practice. Would this considered being sufficient? If so, this should be clearly stated.
- Equation 3: baseline electricity generation, page 23:  
 This formula does either not consider the most frequent situation of export to the grid in the project scenario or should contain an explanation that imports will apply a negative algebraic sign while exports use a positive one. It does also not consider situations frequently seen in agro-industries, where production including power and heat generation is of a seasonal nature. The equation would lead to discount electricity imports during the off-season which would have happened also in the baseline. This results in an unfair treatment of operators which already face barriers due to the seasonal availability of biomass residues.
- Equation 4, page 23/24:
  - the choice of the indice "h" instead of for example "hg" for abbreviation of "heat generator" is very misleading in an equation where the user has to take care not to mix up "energy" units (like GJ, GWh, etc.) with "power capacity" units (like W, GJ/h, etc.).
  - Besides, the unit of CAP HG,total should in this particular equation by explicitly "GJ/y" instead of only "GJ".
  - The "data flow of equations" is also a bit unclear because it seems that the result of these equation 4 is not used at any other place in the methodology. (Only the CAP HG,h reappears in equations 9 and 20, but with the quantifier "for each h" instead of the sum over all h.) It would make more sense to define in equation 4 each variable function of h (CAP HG,yearly,h=8,766\*CAP HG,h\*LFC HG,h) in order to reuse them directly in the right side of equation 9 and 20)
- Determination of baseline availability of biomass, page 24:  
 Such exact determination is close to impossible for non-commoditized fuels (biomass residues) which availability is variable in nature (correlated to weather conditions). The demand will invariably lead to subjective interpretations and countless requests for deviation.
- Index x, page 26 (but also 39, 40 and 68)  
 Index x "last calendar year prior to the start of the crediting period", should rather be "last calendar year, for which data is already available at the time of submission to validation, and prior to the start of the crediting period", because the parameters using this index belong to the list of parameters determined ex-ante.
- Equation 8, page 27:  
 The explanation of equation 8 "should not exceed" is inconsistent with the use of the "equal" (=) used in the equation.
- Equations 10, 14, 15, 16, page 29:  
 In order to increase clarity of equations with quantifiers like "for each heat generator" (like eq 10), "EG for each heat engine" (like eq 14), etc., the exact name of the index of the quantifier "for each heat generator h", "EG for each heat engine i", etc should be specified. The index j in equation 15 and 16 is inconsistent with the summation index i.

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- Equation 18, page 34, (and page 61, data 61 and 62)  
 $h_{LOW,y}$  and  $h_{HIGH,y}$  need to be specified (definition of the “demand side” and of the “generator side”) to be more transparent.
- Step 4, page 36:  
It is mentioned that there are “three cases” but there are only “two” (4.2.1 and 4.2.2)
- Equation 25, page 38:
  - The second equation is wrong (the summation should be on index f instead of index n)
  - The choice of units for the efficiencies (“ratio”) is very misleading as the actual unit would be “MWh /GJ”. In order to get efficiency units as simply “%”, one would need to multiply the numerator of the fractions by 3.6. Using % would be safer but the complete methodology would need to be revised carefully accordingly.
  - Unit of NCV BR,n,x should be “GJ/ tonnes on dry basis” because the unit of BRn,h,x is “tonnes on dry basis”.
- Equation 34/35, page 44, (also data 65 (AVD)):  
It should be clarified whether the total distance is applicable or only the “incremental distance” due to the project activity (like in some other methodologies). Besides, clarification is needed in case the truck is used to transport something else in the back trip.
- Calculation of leakage, p 47:  
As the calculation of leakage may lead to significant reductions of the ER, more guidance on accepted proofs of the biomass surplus should be given. Especially looking at scenario B8, where the source of the biomass could not be clearly identified.
- Not monitored data and parameters, Historic quantities of biomass, heat generation and usage, load factors, page 48 ff.:  
At many sites using biomass residues from a production process, which are available in excess, there was historically no need to determine mass or volume and its moisture content, calorific value etc.. This aspect should be taken to account as it would disqualify many activities especially in less developed economies because of a missing data basis.
- Parameter NCVBR,n,v page 60:  
The term "differ significantly" (last sentence of the box) should be specified.