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### **CDM Executive Board**

UNFCCC Secretariat Martin Luther King Strasse 8 P.O. Box 260124 D-53153 Germany

Re: Call for inputs on specific aspects of approved small scale methodologies for energy efficient residential lighting

Dear Mr. Mahlung,

We thank you for the opportunity to comment on the specific questions raised by the Small-Scale Working Group at its twenty fourth meeting and formalised in Annex 7 to the meeting report. Please find our input hereafter.

# **Exterior Lighting Methodology**

No input on this topic

## **Modifications to AMS-II.C**

# 1. Should AMS-II.C be modified so to eliminate residential CFLs as an applicable measure, and thus require the use of only AMS-II.J for this type of measure?

No. One of the primary factors which are a determinant for the estimate of emission reductions from this type of measures is the usage of CFLs. Under AMS-II.J, the maximum usage hours permitted (after conducting a survey) is capped at 5 hours. In our experience in India, and based on data from ongoing surveys and monitoring, we believe that this type of measure can have usage above 5 hrs. Currently, this is possible only with the AMS-II.C methodology. Hence, it would be appropriate to eliminate residential CFLs from AMS-II.C, only if the 5 hour cap is also removed from AMS-II.J.

# **Modifications to AMS-II.J**

### 1. Should AMS-II.J be modified to eliminate the net to gross (NTG) ratio?

We do not believe that there is a documented estimate of the expected level of leakage from such projects. The level of leakage depends on various aspects of the project design. In many geographies, the CFL is valued by end users as a product delivering superior lighting that they could not afford without the CDM. Being a product delivering an essential service, there is a strong disincentive for the end user to promote or permit leakage. A number of effective measures are available to project proponents to minimise the incidence of leakage (e.g. offering lamp buy backs, deferred payments, etc.). It is therefore important that the project design addresses these aspects in the context of the local situations and has a credible plan to minimise and disincentivise leakage. With a relatively high NTG correction factor, there is little incentive for developers to invest in such measures. We therefore suggest that the



NTG is either removed, or reduced, and project proponents encouraged to implement credible means to disincentivise leakage of devices, which should all form part of the project design description.

If the Small Scale Working Group was to permit the use of manufacturer's self certified LFR profile (rather than an independently tested, linear LFR profile), there would arguably be the need for a NTG factor to introduce an element of conservativeness in assuming self certified non linear LFR values. However, other measures can also be taken to account for the variation between the self certified non linear LFR profile, with the actual field performance or independently tested non linear LFR profile (see response to question 6 below).

2. What language should be added and/or modified so that AMS-II.J can be used for replacement of incandescent lamps with LEDs or other efficient lighting technologies?

AMS-II.J can be broadened to cover 'replacement of any lighting device(s) which enable the same lighting output as in the baseline to be delivered using less electricity'. NB: this should encompass not just direct lighting devices, but also improvements in luminaires and reflectors, however in each case the measurement of the exceedence of lighting output will vary

3. Are there recent credible documentation on the residential operating hours of lamps in non annex I country households? Such information could be used to confirm the conservativeness of the default value used in AMS-II.J or be used to update the value.

Based on ongoing surveys and monitoring of CFL projects in India, the default value and the maximum value allowed are conservative. Our data and analysis so far suggests that usage may exceed the maximum value by a material margin in a large number of households in some non Annex 1 (e.g. in India).

### We therefore recommend:

- A review of the default value is undertaken based on the information from the community of active developers working on such projects across the non Annex 1 geography, and based on inputs from power utilities and other relevant stakeholders;
- In the interim a removal of the maximum cap if developers select to carry out a usage survey.

On a related point, we would like to add, that where projects are undertaken in close proximity, or within a region with similar conditions to support similar usage patterns (as demonstrated to the DOE during validation), the project proponent should be allowed to rely on a recent previously conducted survey report (e.g. conducted within 24 months). E.g. if a project proponent is undertaking 10 CDM projects or 10 CPAs within a state or province with homogenous conditions for lamp usage, rather than require a project proponent to carry out 10 similar surveys a project proponent should be allowed to use the survey results of one project, and/or conduct a survey across the 10 projects or CPAs. This will eliminate replication, and reduce development cost which will increase emission reductions without compromising materially on the accuracy of emission reduction estimates. By allowing concentration of resources, the quality and reliability of surveys will also increase. If certain conditions are different (e.g. daylight incidence), then the project proponent should be allowed to use the survey results by introducing appropriate correction factors (to be validated by the DOE at validation).

Further, project proponents should be allowed to use country wide surveys (or within a region/service area of an electricity distribution company by the local power utility) which may be carried out a government agency or utility



(e.g. in the same manner as some government agencies calculate and update grid emission factors in their national and regional grids).

4. Are there recent credible documentation on the validity of the table in paragraph 2 for use in establishing minimum service levels for both CFL and LED replacements?

Since a reference to a national or international standard can be made, we believe paragraph 2 is appropriate.

5. Is there language that can be used in AMS-II.J to ensure CFLs are of a high quality when used in CDM projects? Should the methodology prescribe minimum level of power factor and rated lifetime for the CFLs?

No. We do not believe the CDM methodology is the appropriate place or instrument to define product specifications for a wide range of non Annex 1 countries. There are local/national authorities and regulations which deal with product standards and periodically set the minimum standards for products sold in each market. It would not be appropriate for a CDM methodology to introduce an independent level of product specification standard. The methodology is already written in a manner to promote the use of lighting devices with long rated lifetimes.

6. How can rated lifetime (50% failure) be reliably documented? Such language should be conservative, applicable to lamp operation and grid characteristics in non annex I countries, and able to be verified by a DOE. Such language should be based on credible documentation of current standards, practices, costs, etc. What procedures should be defined for constructing a mortality curve? Should more time built in for lifetime tests by manufactures or testing labs? Should such tests be done by independent labs? Such information could possibly be used for updating AMS-II.J paragraph 5.

Since independently tested lifetime curves are not available for new, long life products (which are the desirable products to be promoted for end use), we recommend that AMS IIJ allows project proponents to use manufacturers' self certified non linear lifetime curves. Further, in the same manner as the current version of AMS IIJ tests the validity of a linear curve, such a self certified non linear curve is also to be tested against (i) a subsequently available independent test report, or (ii) a field survey. Such a test can be performed at the minimum frequency prescribed by AMS IIJ currently, and the remaining curve altered suitably based on the test.

7. Is there information on the costs and techniques for validating operation of household lamps with respect to their continued operation (monitoring)? Such information should be based on credible documentation. Such information could be used to update language in existing AMS-II.J paragraph 13.

We do not have documented costs of conducting a survey as yet. However, in our view the "General Guidelines For Sampling And Surveys For Small-Scale CDM Project Activities" (EB 50 Report, Annex 30) have recognized the costs of information gathering as a valid consideration while selecting a sampling approach. We believe these guidelines provide important flexibility that enables project proponents to select an appropriate and cost effective means to implement reliable and accurate surveys. We recommend that an explicit mention is made in AMS IIJ to the ability of a project proponent to use any sampling approach that is consistent with the principles and examples outlined in these guidelines.

8. Are the existing criteria for debundling check adequate for the purpose for which it was developed in the context of distributed lighting energy efficiency activities or more in general distributed renewable energy generation or energy efficiency activities? If a modification is deemed necessary what would be criteria that may be revised or additionally applied?



Kindly refer to our request (SSC 391) which summarizes our view and submission on this issue. We recommend that the debundling check is waived on all projects using distributed devices (whether implemented as small scale CDM projects or as CPAs).

Yours truly,

Alexandre Marty Head of Policy – Carbon and Environmental Markets