

June 16, 2011

CDM Executive Board
Small Scale Working Group
P.O. Box 260124
D-53153
Germany

Subject: Call for public inputs on a draft methodology for water saving devices

Dear Sir / Madame,

In response to the request for public inputs on a draft methodology for water saving devices, please find below the comments prepared by our team. In addition to the specific input provided, we would like to remark the following points:

- a) We strongly believe that the proposed top-down methodology for water saving devices is good pointer as to where the CDM should be heading in the next stage and we hope that the methodology will be approved in time to allow for the registration of project activities (or programmes of activities) within the first commitment period of the Kyoto Protocol.
- b) Given that the water saving methodology already contemplates a method for direct determination of hot water consumption (as opposed to the use of standard values), we find no reason to restrict the methodology to low-flow showerheads only. The inclusion of other hot-water saving devices (such as water fixtures) can be made with the same accuracy as showerheads (following the direct measurement method) and would greatly improve the sustainability benefits and economic feasibility of such projects. Otherwise, we are afraid that the effort undertaken by the Executive Board and Small Scale Working Group in getting the meth approved could be fruitless as this type of projects would turn out uneconomical with the installation of efficient showerheads only.

Kind regards,

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- 1) Is the default value of 0.2 MWh of energy savings per low-flow showerhead a conservative and reasonable value? Will this value provide sufficient incentive for low-flow showerhead projects under the CDM given the cost of showerheads, the cost of direct installation, and other program costs as well as the availability of other funding sources to cover such costs? If not, what value would be recommended and what is the basis for this recommendation?

Answer:

We found the proposed value of 0.2 MWh of energy savings per low-flow showerhead inadequate for the following reasons:

- a) A default value per household is intrinsically inappropriate as it fails to reflect the household structure. There is no reason to assume that countries with more inhabitants per household shower less often than countries with less dense households. A more adequate approach would be to use standard energy savings per person and have project owners to monitor the number of inhabitants per household (at least annually).
 - b) In relation to the previous point, the basis for calculating the 0.20 MWh standard energy saving value are far too conservative. For example, 500 showers per household per year in a household composed of 4 persons, means that each person showers only 5 days in a two-week period. Also, the assumption of a 5-minute standard shower time is far below any reported value in relevant literature. Even considering cultural and geographical differences, it is rarely reported shower times below 8 minutes.
 - c) Finally, the standard energy saving value proposed makes this type of projects entirely uneconomical. Let's assume a project consisting of the free installation of low-flow showerheads in 100,000 households. If we assume that the showerheads save water heated through LPG gas-heaters, then, a value of 5,676 CERs / year is obtained using the simplified procedure. Taking a price of 10 EUR / primary CER, then an income of 56,760 EUR would be generated annually. The cost of the showerheads is likely to be above 10 EUR / showerhead and the logistic costs for the project can easily double the material costs. So, assuming a cost of 20 EUR / showerhead (and without considering annual M&V costs), it would take more than 35 years to recover the initial costs.
- 2) Should the methodology require that there be a maximum flow rate allowable for a low-flow showerhead, for example nine litres a minute? Should the methodology require that there be a minimum difference between the baseline and project showerheads flow rates, for example one litre per minute? Should the methodology specify a minimum flow rate for the baseline showerheads? If so, what values would be recommended and what is the basis for this recommendation?

Answer:

The water flow of the showerheads is heavily dependent on the pressure of the water supply. The same showerhead consumes a different amount of water when working under high pressure or under low pressure. If standard (minimum or maximum) water flows are defined, they should be specified for different working pressures. Alternatively, it should be requested that showerheads are certified as "ecological" according to local or international standards (as these standards typically define the maximum flows under low, medium and high pressure).

- 3) Is the requirement that low-flow showerheads must contain integral, non-removable flow restrictions and come with a one-year warranty reasonable, and if not, what recommendations would be suggested to ensure that such devices are of relatively high quality, do not simply involve the insertion of plastic flow restrictors, and/or are not easily disabled?

Answer:

Rather than a requirement in the construction of the showerhead, we believe that the methodology should be emphatic on the requirement of frequent checks (i.e. annually) to make sure that the water saving devices are operational.

- 4) Should a third-party testing and/or manufacturer certification of the low-flow showerheads flow rates be a requirement of the methodology?

Answer:

We find this requirement reasonable.

- 5) The minimum temperature allowable for cold water supply to the water heating system is 10°C and the maximum temperature allowable for showerhead water outlet is 40°C. Are these conservative and reasonable values and if not, what value would be recommended and what is the basis for this recommendation?

Answer:

We believe that the most conservative and accurate value for cold water supply is the low average temperature for a specific month and location based on national statistics.

- 6) Is the monitoring approach defined in the methodology reasonable and cost effective, and if not, what would be recommended and what is the basis for this recommendation?

Answer:

The monitoring approach suggested sounds reasonable to us. We have no information to assess whether it is cost effective or not.

- 7) Is it appropriate, as assumed for the monitoring approach, that the number and length of showers (minutes per shower) is the same before and after the installation of the low-flow showerhead? That is, can it be assumed that the decrease in flow rate does not change the showering effectiveness or patterns?

Answer:

We believe that such assumption is a valid one as there is no reason to assume that shower time differs from one type of showerhead to another.

- 8) Would it be practical and perhaps more reliable to use a control group approach for determining energy savings from the installation of showerheads, and perhaps other water saving devices? A control group approach would involve comparing the annual energy use, in real time, between the participants in the CDM program and a group of non- participants with characteristics same as the participants (other than use of water saving devices);

Answer:

A control group seems impractical to us, as the selected households would have no incentive to engage into a long term monitoring programme. Also, households may be biased in their water consumption being aware that their consumption is being continuously monitored for a long term.

- 9) Are there any special requirements that should be imposed for PoAs?

Answer:

None identified