Information note

Considerations of NM0350 "Improving Energy Efficiency in Data Centers through Dynamic Power Management"

(Version 01.0)

I. Background

1. The Executive Board (hereinafter referred to as the Board) of the clean development mechanism (CDM) requested, at its fify-fifth meeting, the Methodologies Panel (the panel) to further work on the draft new methodology "Energy efficiency in data centres through dynamic power management" based on the proposed new methodology NM0350 in order to consider:

(a) The temporal pattern in which electricity consumption is reduced due to the project activity and the type of power plants that are impacted during these times, in order to ensure that saving in electricity usage is calculated conservatively;

(b) The approach used for the market penetration survey of the dynamic power management technology, including the appropriateness of the geographical boundary and the practicability of the approach;

(c) The appropriateness of the approach for demonstrating additionality, taking into account the profitability of the project type.

2. The panel further revised the draft methodology taking into account the board's considerations. Moreover, the panel would like to clarify its reasoning for proposing the methodology in its current form and how the concerns from the Board are addressed.

II. Methodological considerations

3. Regarding the concern whether the emission reductions could be correlated with the grid situation at the time the emission reductions occur, the panel advises against integrating this aspect into the methodology for the following reasons:

(a) The dispatch data that would be required for calculating the grid emission factor during specific hours is not available in most host countries. Adding such a requirement to the methodology would greatly limit its applicability to countries for which dispatch data is available, i.e. less than 10 developing countries;

(b) Introducing an approach to correlate the time at which energy is saved to the grid emission factor would have implications for all demand side energy efficiency methodologies;

(c) It is the opinion of the panel that using the "Tool to calculate the emission factor for an electricity system" in its current form is conservative, even when applied to situations in which the emission reduction activity occurs in a specific time period of the day.

4. Regarding the concern whether the market penetration in its current form is adequate, the following changes are proposed in the draft methodology:

(a) The level of market penetration is accounted for in determining the emission reductions at validation of the project activity, and not only from year 4 onwards;

(b) The market penetration is to be assessed in the same relevant geographic area identified when applying the common practice analysis. If the applicable geographic region includes less than

10 data centres, the geographical area will be expanded to neighbouring areas until at least 10 data centres are included;

5. Regarding the concern that project activities using the proposed methodology might not be additional due to the expected low investment costs:

(a) The methodology follows "combined tool to identify the baseline scenario and demonstrate additionality" for the additionality demonstration;

(b) For the purpose of the methodology, the barriers that can be mitigated by additional financial means and can be quantified and represented as costs have to be quantified and considered under the investment analysis. The methodology was amended to include an explicit requirement to consider these barriers under an investment analysis.

6. The draft methodology was revised to allow both 21 years renewable crediting period and 10 years fixed crediting period. The discount factor introduced in the methodology accounts for the penetration rate of the technology on an on-going basis, including at the renewal of the crediting period.

- - - - -

History of the document

Version	Date	Nature of revision
01.0	20 July 2012	EB 68, Annex # To be considered at EB 68.
Decision Class: Regulatory **Document Type**: Information note **Business Function**: Methodology		