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5 December 2005

## **Submission on Alternative Methods for Calculating Emission Reductions for Small-Scale Project Activities that propose the Switch from Non-Renewable to Renewable Biomass**

### **INTRODUCTION**

This submission proposes a methodology that accounts for non-renewable biomass in the baseline. It treats GHG emissions from non-renewable biomass (NRB) in the way emissions from combustion of fossil fuels are treated, and in the way emissions from non-renewable in the project scenario are treated in the approved modalities and procedures for small-scale CDM projects adopted by EB 21, which says that combustion of any non-renewable biomass shall be accounted in the same way as combustion of fossil fuels. The proposed methodology is proposed to apply to small-scale methodologies I.A, I.B, I.C, I.D, II.A, II.B, II.C, II.D and II.E.

Projects with NRB in the baseline could be categorized into the following five groups:

1. Switching from NRB to renewable biomass with no change in conversion technology. Example: change from non-renewable fuelwood to renewable fuelwood;
2. Switching from NRB to renewable biomass, including a change in conversion technology. Example: replacement of fuelwood or charcoal with biogas;
3. Replacing NRB with renewables such as wind energy for electricity generation, solar cooking stoves;
4. Switching from NRB to kerosene or LPG, where the technology change causes an increase in energy efficiency, and thus reduction in CO<sub>2</sub> emissions. To effects occur: a) switching to a lower carbon intensity fuel b) increase in conversion efficiency, and thus less energy use overall;
5. Reducing consumption of NRB through energy-efficiency improvements: efficient cooking stoves or heating systems, improved charcoal production; demand-side measures (e.g., improved housing insulation).

While the EB21 decision excludes all these five project types that replace NRB from the small-scale CDM, it only asks for submissions of new methodologies on the first two types, where NRB is replaced with renewable biomass. The present submission, however, is proposed to apply to all five above categories.

Further, it should be considered that many devices using NRB, such as stoves, are only used 1-2 hours per day. Thus, where the threshold for small-scale projects is based on capacity, an adjustment of the threshold based on hours of use (capacity factor) should be made (e.g., 8760 hrs per year / 600 hrs of actual use per year).

### **METHODOLOGY**

- 1) Calculate CO<sub>2</sub> emissions from NRB in the baseline scenario by multiplying the fuel consumption (oven dry basis) with the relevant IPCC default, national or other accepted CO<sub>2</sub> emission factor for wood, charcoal or other biomass-based fuel.
- 2) Demonstrate that biomass is non-renewable through one or more of the following options:
  - a) Demonstrate that the distance of biomass transport to the point of consumption has been increasing in the recent past.
  - b) Demonstrate using literature sources that the current trend of biomass use in the region (including projected increase during the crediting period of the project) cannot be sustained in the long term.
  - c) Estimate biomass sustainable supply (defined as a supply that can be sustained in the long term) and demand in the region, and demonstrate that demand exceeds sustainable supply. For this, FAO statistics, other literature, and locally available data can be used.
  - d) Further options could be added, as appropriate, from other submissions to the EB.