United Nations Framework Convention on Climate Change

Agenda item 4.1 (c).
Paragraph 27 of the annotated agenda, Annex 5 of MP83

SSC-III.XX: Switch from non-renewable biomass to electricity for cooking applications by the user

CDM EB 108

Virtual meeting

1 to 3 December, 9 to 11 December and 14 December 2020

UNFCCC Secretariat
Mitigation Division

Procedural background

- **SSC-NM0105** was submitted on 21 May 2020

- Submitted by Value Network Ventures Advisory Services Pvt. Ltd. for proposed PoA to disseminate induction-based electric cookstoves in Nepal

Purpose

- Draft methodology is for **switch from non-renewable biomass to electricity** in residential and institutional cookstove sector.

Key issues and proposed solutions

- **Key applicability conditions**

  a) Users **connected to national/regional/mini-grid**;

  b) Project devices shall have **min. 50% thermal efficiency**.

- **Additionality demonstration** -

  a) Option 1 – **Positive list** – Demonstrate the penetration of electric cooking appliances is <=5 % in the project activity region;

  b) Option 2 – Apply provisions of “TOOL21: Demonstration of additionality of SSC project activities”;

  c) Option 3 – Apply provisions of “TOOL19: Demonstration of additionality of microscale project activities”.

Key issues and proposed solutions

- **Baseline scenario** – Use of non-renewable biomass to meet cooking demand.
- **Project scenario** – Electric cooking device powered by a national / regional / mini grid comprising renewable and fossil fuel sources.
- Determining the proportions of woody biomass and other fuels for cooking before the start of the project and at the renewal of each crediting period through sample-based survey is required.

Key issues and proposed solutions

- Baseline emissions are:
  - **Quantity of woody biomass displaced (B_y)**, calculated based on **thermal energy** generated (**$HG_{p,y}$**) and **efficiency of the baseline devices**;
    - $HG_{p,y}$ is calculated using:
      - **Electricity consumption** of project devices, **measured using data-loggers (** sampled to 90/10 precision);
      - **Proportion** of operating devices in a year; and
      - **Efficiency** of electric cooking devices

Key issues and proposed solutions

- Project emissions are based on **measured electricity consumption** of project cooking devices and emission factor calculated using TOOL05 requirements;

- Leakage is considered in-line with existing provisions of AMS-I.E.

Stakeholder comments

- Stakeholder stated that **direct measurement of electricity** under the meth **underestimates baseline biomass consumption** as:
  1. **Higher thermal efficiency** of project devices is not considered; and
  2. **Additional efficiency gains** due to heat control and heat retention with project devices are **disregarded**.
- Meth **creates perverse incentive** to deploy **inefficient** project devices.
- **Allow defaults/surveys for biomass consumption**

- Resp: Meth accounts for efficiency of baseline cooking devices and efficiency of electric stoves (energy savings, heat control and heat retention can be accounted for).
- Only electric cooking appliances with **thermal efficiency > 50% eligible**

Stakeholder comments

- Electricity consumption of cookstoves varies depending on cookstove type, geographical, cultural and household characteristics (e.g. number of persons).

a) World Bank Report cited by submitter mentions higher values of electricity consumption for Zambia with HH size of 3.3, as 2.47 kWh/day/HH i.e. 901 kWh/year/household as compared to 372 kWh/year/HH cited for Kenya with HH size of 4.2

Stakeholder comments

Allow the cases where the users are connected to renewable grid (RE grid) under the draft methodology.

- Resp – CDM M&P requires that renewable electricity generation is covered under Type-I methodologies, such cases are covered under AMS-I.E.

- Combination of small-scale methodologies for PoAs or projects is possible to cover potential users connected to RE grid and grid comprising RE and FF.

Impacts

- Draft methodology if approved will allow additional **CDM activities** in the household and institutional **cookstove sector**.

Recommendations to the Board

- Meth Panel recommends that **the Board approves this draft methodology**, to be made effective at the time of the Board's approval.