

 <p align="center"><b>CDM: Form for Submissions on Small Scale Methodologies and Procedures (version 03)</b>  <i>(To be used for presenting questions/proposals/amendments related to the simplified methodologies for small-scale CDM project activity categories)</i></p>	
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Affiliation <sup>1</sup> :	<input type="checkbox"/> DNA <input type="checkbox"/> DOE <input type="checkbox"/> PP <input checked="" type="checkbox"/> Stakeholder PDD consultant
Title/Subject (max. 200 characters):	Clarification on the calculation of the thermal output of a cook stove for applicability of small-scale limit of 45 MW <sub>th</sub>
Purpose of the submission:	<input checked="" type="checkbox"/> Query on an approved SSC methodology or small scale procedures <sup>2</sup> (Fill in field 1. below) <input type="checkbox"/> Request for Revision of an approved SSC methodology (Fill in fields 2. and 3. below) <input type="checkbox"/> Proposal for a new SSC methodology (Fill in fields 4. and 5. below)
Approved SSC methodologies <sup>2</sup> to which your submission relates to, if applicable.	AMS-I.E. "Switch from Non-Renewable Biomass for Thermal Applications by the User --- Version 2"
Contact Information (e-mail addresses to which the answers are to be delivered and phone contacts for possible dialogue on the submission).	a.dunod@ecosurafrique.com [Tel.] +33 607 828 011
<b>Information for completing the form</b> Describe the questions related to the SSC Methodologies, Modalities and Procedures below. If the questions are related to a project under development or implementation, you may describe the context in which they arose.	
<b>Query on an approved SSC methodology or SSC procedures</b>	
1. If you have questions relating to the application of an approved small-scale methodology (AMS) please specify and provide reference to the exact technology/measure below. If you have questions related to procedures for SSC project activities please clarify below:	

<sup>1</sup> Designated National Authority (DNA); Designated Operational Entity (DOE); Project Participant (PP), and Stakeholder.

<sup>2</sup> The list of all approved small-scale methodologies (AMS) can be found at <http://cdm.unfccc.int> and go to CDM: small scale CDM methodologies.

**Context:** in the project under consideration, the Project Proponent intends to distribute new efficient cook stoves and implement sustainable plantations to supply them with renewable woody biomass in substitution to charcoal in Democratic Republic of Congo, a Least Developed Country severely damaged by deforestation.

We would like you to publish a clear affirmation that the “**useful power**” approach is one of the preferred options to calculate the **installed/rated capacity** of a cook stove in order to verify compliance with small-scale limit of 45 MW of **thermal output** for the applicability of AMS-I.E. Indeed, from the available General Guidelines to SSC CDM methodologies (EB 55 Annex 35), it is not detailed how the manufacturer should determine the “installed/rated” thermal output of a cook stove.

**Ideally, we would like you to publish the following:**

**Useful power approach:** In coherence with the recently registered cook stove project in Zambia under AMS-I.E (PDD Ref 2969, registered 09 Jan 10) and expert literature (Colorado State University’s Engines and Energy Conversion Laboratory Stove Manufacturers Emissions & Performance Test Protocol<sup>1</sup> and Aprovecho Research Center Water Boiling Test<sup>2</sup>), the thermal output of a cook stove can be determined as the “mean effective thermal power”, i.e. the quotient of effective energy delivered for the cooking process divided by heating time.

In other words, this corresponds to the average rate of energy released from fuel combustion that is transferred to the pot over the duration of a certified water boiling test:

$$\frac{c_p * m_{w,i} * (T_f - T_i) + H_v * (m_{w,i} - m_{w,f})}{t_c}$$

Where:

- $c_p$  is the heat capacity of water (4.186 J/g°C)
- $m_{w,i}$  is the mass of water prior to test
- $T_f$  is the water temperature after test
- $T_i$  is the water temperature prior to test
- $H_v$  is the enthalpy of vaporization of water (2260 J/g)
- $m_{w,f}$  is the mass of water after test
- $t_c$  is the test duration

<sup>1</sup> see attached document. Additional online resources available at <http://www.eecl.colostate.edu/research/household.php>

<sup>2</sup> online resources available at <http://www.aprovecho.org/lab/pubs/testing>

P.S: We have encountered the following editing mistakes in General Guidelines to SSC CDM methodologies (EB 55 Annex 35) which you may consider in the next revision:

- footnote 1 of §4 a) page 2 does not seem to correspond to anything
- footnote 1 of §1 page 1 points out to a broken URL

### Request for revision of an approved SSC methodology

2. If you are proposing an amendment/revision to an approved small-scale methodology (AMS), please provide justifications below:

NA

3. If you are proposing an amendment/revision to an approved small-scale methodology (AMS) please provide the draft methodology with changes highlighted.

The following documents have been attached to this form:

- ☐ Draft methodology with changes highlighted in Word and PDF formats
- ☐ PDD in PDF format (optional)
- ☐ Additional information (please specify if you are providing any information note, published paper or a report in support of the request for revision of the SSC methodology)

### Proposal for a new SSC methodology

4. If you are proposing a new small scale methodology, please provide justifications below:

NA

5. For submitting a new small scale methodology a filled in form “CDM: form for proposed new small scale methodologies (F-CDM-SSC-NM)” is required.

The following documents have been attached to this form:

- ☐ Completely filled in form “CDM: form for proposed new small scale methodologies (F-CDM-SSC-NM)” in Word and PDF formats<sup>3</sup>
- ☐ A draft PDD (with sections A to C completed):
  - ☐ Relevant annexes to the PDD are provided
  - ☐ Additional information (please specify if you are providing any information note, published paper or a report in support of the new SSC methodology)

*Date you are delivering the contribution:*

September the 21<sup>st</sup>, 2010

**Information to be completed by the secretariat**

SSC-Submission number

<sup>3</sup> The current version of the form (F-CDM-SSC-NM) is available on the UNFCCC CDM website (<http://cdm.unfccc.int>).