CLEAN DEVELOPMENT MECHANISM
SMALL-SCALE PROGRAM ACTIVITY DESIGN DOCUMENT FORM (CDM-SSC-CPA-DD)
Version 01

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NOTE:

(i) This form is for submission of CPAs that apply a small scale approved methodology using the provision of the proposed small scale CDM PoA.

(ii) The coordinating/managing entity shall prepare a CDM Small Scale Programme Activity Design Document (CDM-SSC-CPA-DD)[1,2] that is specified to the proposed PoA by using the provisions stated in the SSC PoA DD. At the time of requesting registration the SSC PoA DD must be accompanied by a CDM-SSC CPA-DD form that has been specified for the proposed SSC PoA, as well as by one completed CDM-SSC CPA-DD (using a real case). After the first CPA, every CPA that is added over time to the SSC PoA must submit a completed CDM-SSC CPA-DD.

[1] The latest version of the template form CDM-CPA-DD is available on the UNFCCC CDM web site in the reference/document section.

[2] At the time of requesting validation/registration, the coordinating managing entity is required to submit a completed CDM-POA-DD, the PoA specific CDM-CPA-DD, as well as one of such CDM-CPA-DD completed (using a real case).

List of abbreviations:

CDM	Clean Development Mechanisms
CER	Certified Emissions Reductions
CH4	Methane
CME	Coordinating/ Managing Entity
CO2	Carbon dioxide
CPA	CDM Project activites
DD	Design document
DOE	Designated operational entity
EC	Eligibility criteria
FAO	Food and Agriculture Organization
GPS	Global Positioning system
GWh	Giga watt hours
ICS	Improved cooking stove
ID	Identification
IPCC	Intergovernmental panel on climate change
LGA	Local Government Area
NRB	Non-renewable biomass
ODA	Official Development Assistance
PoA	Program of activities
N2O	Nitrous oxide
SSC	Small-scale program
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
WBT	Waterboiling Test

SECTION A. General description of small scale CDM programme activity (CPA)

A.1. Title of the small-scale CPA:

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CPA # 1 Improved Cooking Stoves for Nigeria

Version:	2.1
Date of completion:	24/10/2011
Completed by:	atmosfair gGmbH

Version of the generic CPA template:	2.1
Date of completion:	24/10/2011
Completed by:	atmosfair gGmbH

A.2. Description of the small-scale CPA:

>>
Entities involved in the CPA

The small-scale CPA will be implemented by the managing entity atmosfair gGmbH. Distributors, which are in contractual relations with the managing entity, and which gained access to technology and/or finance through the programme, will sell, install and maintain improved cook stoves in Nigerian households.

Technology to be deployed

The improved cook stove (ICS) disseminated under this SSC-CPA will be the "SAVE80", a portable stove made of stainless steel, developed and prefabricated by a German manufacturer and assembled locally to create employment and income. The initial model has a specified thermal efficiency of 52% and nominal effective thermal power of about 1.5 kW. As per specification of the manufacturer, the SAVE80 needs only about 250 g of small brittle sticks of wood to bring 6 litres of water to the boil, 80% less than traditional fire places. The design ensures preheating of the air and a complete combustion with no visible smoke and only small amounts of ash.
Design of the SAVE80 may develop over time.
The SAVE80 system also consists of custom-fit pots, pans and a heat retaining box ('Wonderbox'), where food can be transferred after reaching the boiling temperature, and where it will continue to simmer until it is well cooked. The Wonderbox allows important energy savings in addition to the savings by the Save80. However, these energy savings will not be taken into account for calculating emission reductions which is increasing the overall conservativeness of the Emission Reduction calculations.

The heat retaining box (left) and the SAVE 80

Marketing and sales strategy

One possible marketing and sales strategy is awareness creation and cooking demonstration, which may be conducted frequently in different areas by distributors, where user households are informed about the benefits of the improved cooking stoves, especially about the savings in firewood consumption.
Local focal points (religious communities, associations, unions etc.) may facilitate the sales procedure.
Other distribution channels such as retailing networks or from networks from financial institutions may also be used.

User Agreements

When a user purchases an improved cooking stove, it will be property of the user. However, as CDM funding is subsidising the dissemination of the ICS, it will be ensured that users confirm on the sales receipt

- to cede all CERs to the managing entity
- to cooperate with the distributor and the managing entity for monitoring purposes
- that firewood and/ or charcoal was used prior to receipt of the ICS

A sales receipt will be handed over to the buyer, and a copy remains with the distributor.

Payment schemes

The distributors may offer payments in instalments to overcome the financial constraints of many customers. For example, if monthly instalments are agreed upon, payments can be collected either directly or by focal points (e.g. church communities) or deducted from the monthly salaries (in case of associations, unions etc.).

Record keeping

An electronic record keeping system will be operated and maintained by the managing entity for this CPA, which contains at least the following information:

- Name and ID of the CPA
- Technology deployed (Name of the ICS type)
- Name and contact details of the registered distributors for the CPA, date of registration of the distributor
- Serial numbers (Stove-ID) of the ICS belonging to the CPA[3] and corresponding information required for monitoring (please refer to Section E.7.2 of the PoA-DD for details)
- Start of CPA crediting period

The record keeping system will be updated as per the progress of the CPA.

Indicative implementation schedule for the CPA

Period	Average N° of SAVE80 systems deployed*
2012	1,600
2013	3,120
2014	2,964
2015	2,816
2016	2,675
2017	2,541
2018	2,414
2019	2,293

[3] The serial numbers for the ICS will be either from the manufacturer and manufacturer will confirm with each order that the serial numbers are unique; or, if the serial numbers are allocated by the CME, the ICS shall have a code for the PoA (PoA registration number; alternatively: atm), followed by a code for the ICS itself. Example: atm00001. Note: There may also be a separate code for the distributor or for other reasons, but since this is not required to uniquely identify the ICS it is not relevant here.

2020	2,179
2021	2,070

* i.e. fully operational during the whole specified period

Limit of the SSC-CPA and maximum number of stoves deployed

The CPA will remain under the limit of small-scale project activity types (annual energy savings below 180 GWh, threshold as per clarification request SSC_233, available under: http://cdm.unfccc.int/methodologies/DB/6U8JYO9XTLVZ8LJ7GUBSZP145BIDG2) during every year of the crediting period. Please refer to eligibility criterion 15 in Section B.2.

Since the CPA applies Approach 1: Demonstration of Additionality of Microscale Project Activities in line with the PoA-DD, Section A.4.3, the number of ICS to be deployed under the CPA remains under the threshold of 20 GWh (corresponding to 60 GWh thermal energy savings) during every year of the crediting period. Please refer to eligibility criterion 14 in Section B.2.

Therefore, under this CPA the maximum number of ICS to be deployed per year will not exceed 3,200. The equation on how this number is determined can be found in Section B.2., eligibility criterion 14 (equations 1 to 4).

A.3. Entity/individual responsible for the small-scale CPA:

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atmosfair is the coordinating/managing entity of the PoA who shall communicate with the Executive Board.

Entity responsible for the small-scale CPA (same or different from the coordinating/managing entity):

Name of entity	Atmosfair gGmbH
Nature of entity	German Non profit organisation.
Contact details	Florian Zerzawy, Atmosfair gGmbH, Zossener Straße 55, 10961 Berlin, Germany, Tel. +49-30-62735500, zerzawy@atmosfair.de

A.4. Technical description of the small-scale CPA:

A.4.1. Identification of the small-scale CPA:

>>
CPA # 1 Improved Cooking Stoves for Nigeria

A.4.1.1. Host Party:

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Federal Republic of Nigeria

A.4.1.2. Geographic reference or other means of identification allowing the unique identification of the small-scale CPA (maximum one page):

All appliances disseminated under this CPA shall have a unique serial number, allowing to doubtlessly identify the appliance. Serial numbers are transferred to the corresponding CPA electronic record keeping system.

The serial numbers for the ICS will be either from the manufacturer and manufacturer will confirm with each order that the serial numbers are unique; or, if the serial numbers are allocated by the CME, the ICS shall have a code for the PoA (PoA registration number; alternatively: atm), followed by a code for the ICS itself. Example: atm00001. Note: There may also be a separate code for the distributor or for other reasons, but since this is not required to uniquely identify the ICS it is not relevant here.

Codes used for this CPA:

1. atm - Serial number
2. [PoA registration number] - Serial number

Note: There may also be a separate code for the distributor or for other reasons, but since this is not required to uniquely identify the ICS it is not relevant here. The – between the text under 1. and 2. is for readability in this text only, hence it may not be part of the code on the ICS.

A.4.2. Duration of the small-scale CPA:

A.4.2.1. Starting date of the small-scale CPA:

>>
29/03/2011

A.4.2.2. Expected operational lifetime of the small-scale CPA:

>>
13 years
The most sensitive part of the SAVE80 stove is the burning chamber. The burning chamber of a SAVE80 which was in use for four years was tested by the German Material Testing Institute ("Staatliche Materialprüfamt für den Maschinenbau"), Technical University Munich, for corrosion and damages on the steelplates. Only minor damages were found: The lifetime of the burning chamber under frequent usage conditions was calculated to be at least 13 years.
If the SAVE80 burning chamber does not last throughout the crediting period, replacements will be made to assure a lifetime over the CDM crediting period. If ICS are replaced, records will be kept for both the replaced and the new appliance.

A.4.3. Choice of the crediting period and related information:

Fixed Crediting period

A.4.3.1. Starting date of the crediting period:

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29/03/2011 (starting date of the CPA) or the date of CPA inclusion, whichever is later. CPA crediting period not to exceed PoA end date.

A.4.3.2. Length of the crediting period, first crediting period if the choice is renewable CP:

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10 years

A.4.4. Estimated amount of emission reductions over the chosen crediting period:

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Year	Estimation of project activity emissions (tCO_2e)	Estimation of baseline emissions (tCO_2e)	Estimation of leakage (tCO_2e)*	Estimation of overall emission reductions (tCO_2e)
2012	0	5,780	N/A	5,780
2013	0	11,270	N/A	11,270
2014	0	10,707	N/A	10,707
2015	0	10,171	N/A	10,171
2016	0	9,663	N/A	9,663
2017	0	9,180	N/A	9,180
2018	0	8,721	N/A	8,721
2019	0	8,285	N/A	8,285
2020	0	7,870	N/A	7,870
2021	0	7,477	N/A	7,477
Total (tonnes of CO2e for the first crediting period)	0	**89,123**	N/A	**89,123**
Average annual tonnes of CO2e for the first crediting period	0	8,912	N/A	8,912

*As per AMS II.G. ver. 3, if Leakage has to be considered then B_{old} is adjusted to account for the quantified leakage. Therefore, leakage emissions shall be considered in the baseline emissions calculation.

A.4.5. Public funding of the CPA:

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There is no public funding of the CPA. All subsidies for the project are stemming from CDM revenues prepayments on future CDM revenues.

A.4.6. Information to confirm that the proposed small-scale CPA is not a de-bundled component

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As demonstrated in the PoA-DD, each proposed small-scale CPA is exempted from performing de-bundling check and therefore shall not be considered a de-bundled component, as each of the independent subsystem/measures included in the CPA of a PoA is no greater than 1% of the small scale threshold defined by the methodology, AMS II.G. This is confirmed by eligibility criterion 7, Section B.2, through the manufacturer specification.

A.4.7. Confirmation that small-scale CPA is neither registered as an individual CDM project activity or is part of another Registered PoA:

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The small-scale CPA is neither registered as an individual CDM project activity nor is it part of another registered PoA. No ICS distributed under the specific CPA will be part of another single CDM project activity or CPA under another PoA.

SECTION B. Eligibility of small-scale CPA and Estimation of emissions reductions

B.1. Title and reference of the Registered PoA to which small-scale CPA is added:

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Improved Cooking Stoves for Nigeria Programme of Activities, version 2.3 (of PoA-DD), 24/10/2011

B.2. Justification of the why the small-scale CPA is eligible to be included in the Registered PoA :

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Nr	Eligibility Criteria		Compliance		Mean of proof / Evidence Document (to be checked at CPA inclusion)
	Category	Description	Yes	No	
1	Technological requirements	The CPA consists of distribution of domestic ICS,	☒	☐	Specification of ICS type and compliance with the technological

		stove type (single pot or multi pot portable or in-situ cook stove) defined in the CPA-DD, and hence appliances involving the efficiency improvements in the thermal applications of non-renewable biomass as per AMS II. G, ver. 3 Please note that not all ICS may have been deployed at CPA inclusion stage, the 'type and number of ICS deployed' will however also be checked during verification, and in case any deployed ICS type will be found not in line with the methodology requirement, those ICS will not be counted for emission reduction calculation.			requirements of AMS II G in the specific CPA-DD: The ICS to be deployed is the SAVE80 system, which is a single pot, portable domestic cook stove and hence an appliance involving the efficiency improvements in the thermal applications of non-renewable biomass as per AMS II. G, ver. 3 Document: Product information sheet from manufacturer
2	Efficiency of the ICS	The ICS disseminated under the CPA has a specified efficiency of at least 20%	☒	☐	Manufacturer Specification for the Save 80 shows a thermal efficiency of 52%.
3	Boundary and location of the CPA	The CPA is located within Nigeria. Please note that not all ICS may have been deployed at CPA inclusion stage, the location of the ICS can however also be checked during verification, and in case any deployed ICS type will be found not in line with the boundary/ location requirement, those ICS will not be counted for emission reduction calculation.	☒	☐	Location and boundary is specified in the specific CPA-DD stating that the location is limited to Nigeria as mentioned in Section A.4.1.1, Host Party: Federal Republic of Nigeria Document: Statement of CME that the location and boundary is within Nigeria.
4	No Double counting of ICS	An unique numbering or identification system for the stoves disseminated is applied	☒	☐	The specific numbering or identification regime is included in the specific CPA-DD as mentioned in Section A.4.1.2: All appliances disseminated under this CPA shall have a unique serial number, allowing to doubtlessly identify the appliance. Serial

					numbers are transferred to the corresponding CPA electronic record keeping system. The serial numbers for the ICS will be either from the manufacturer and manufacturer will confirm with each order that the serial numbers are unique; or, if the serial numbers are allocated by the CME, the ICS shall have a code for the PoA (PoA registration number; alternatively: atm), followed by a code for the ICS itself. Example: atm00001. Note: There may also be a separate code for the distributor or for other reasons, but since this is not required to uniquely identify the ICS it is not relevant here. Codes used for this CPA: 1. atm - Serial number 2. [PoA registration number] - Serial number Note: There may also be a separate code for the distributor or for other reasons, but since this is not required to uniquely identify the ICS it is not relevant here. The – between the text under 1. and 2. is for readability in this text only, hence it may not be part of the code on the ICS. Document: First stove sales receipt (first CPA of PoA)
5	CER ownership	End users receiving ICS under the specific CPA contractually cede their rights to claim and own emission reductions under the Clean Development Mechanism of the UNFCCC to the CME of the PoA.	☒	☐	The default ICS sales receipt provided for end users is including the provision that emission reductions generated by the stove are owned by the CME Documents: 1. Default ICS sales receipt

					2. First stove sales receipt (first CPA of PoA)
6	Technical requirement	Only new ICS will be disseminated	☒	☐	Specification of stove type and compliance with the technological requirements of AMS II G is described in t in Section A.2. of the specific CPA-DD. Document: 1. Statement from CME that only new stoves will be disseminated under the CPA 2. First stove sales receipt (first CPA of PoA)
7	De-bundling	The CPA is exempted from performing the de-bundling check since each individual sub-system, i.e. ICS, has thermal energy savings of less than 1% of the SSC threshold and will remain within this threshold throughout the crediting period. Please note that not all ICS may have been deployed at CPA inclusion stage, but the 1% threshold however can also be checked during verification, and in case any deployed ICS type will be found not in line with the De-bundling requirement, those ICS will not be counted for emission reduction calculation.	☒	☐	Calculation is provided in the PoA DD (equations 1 to 4 in Section A.4.4.1 that show that according to thermal energy savings calculation provided in the AMS II G. in order to exceed the 1% threshold the number of eaters even under a 100% efficient ICS would be 693. Document: Manufacturer specification, demonstrating that the number of eaters is less than 693. Please note: The manufacturer specification value will be used for parameter HH_Cap, which is the max. value to be applied for calculation of emission reductions.
8	No Double-counting of CPA	The CPA is exclusively bound to the PoA. Confirmation that the programme activity has not been and will not be registered either as a single CDM project activity or as a CPA under another PoA.	☒	☐	A statement is included in the CPA-DD in Section A.4.7 that the specific CPA will not be part of another single CDM project activity or CPA under another PoA: The small-scale CPA is neither registered as an individual CDM project activity nor is it part of another registered PoA. No ICS distributed under the specific CPA will be part of another single CDM project activity or CPA under

					another PoA. Evidence: Check on UNFCCC website, date of access: 19/09/2011
9	Awareness and agreement of those operating a CPA on PoA subscription	Contractual provisions to ensure that those operating the CPA are aware and have agreed that their activity is being subscribed to the PoA	☒	☐	Declaration from CPA operators, stating that they are aware and have agreed that their activity is being subscribed to the PoA.
10	Non-diversion of ODA in case of Public funding	The CME and the CPA operator (in case of being different from the CME) shall confirm that in case of public funding there shall not be diversion of Official Development Assistance.	☒	☐	Statement of CME and the CPA operator (in case of being different from the CME)
11	CPA start date	CPA start date shall not be before PoA webhosting date, i.e. 20/11/2010. Please note that not all ICS may have been deployed at CPA inclusion stage, the ICS start date can however also be checked during verification, and in case any deployed ICS will be found not in line with CPA start date requirement, those ICS will not be counted for emission reduction calculation.	☒	☐	Starting date as stated in the CPA-DD is after 20/11/2010. Starting date as mentioned in Section A.4.2.1: 29/03/2011 Document: 1. Statement from CME that no ICS under the CPA were sold before 20/11/2010. 2. First stove sales receipt (first CPA of PoA)
12	CPA crediting period	CPA starting date of the crediting period is date of inclusion into registered PoA or any date thereafter and crediting period not to exceed the PoA end date	☒	☐	CPA crediting period starting date is date of CPA inclusion into registered PoA or any date thereafter and crediting period not to exceed the PoA end date as mentioned in Section A.4.3.1: 29/03/2011 (starting date of the CPA) or the date of CPA inclusion, whichever is later. CPA crediting period not to exceed PoA end date.

13	Approval of CPA by CME	CME approved each CPA to be included into its registered PoA	☒	☐	Statement of CME giving approval for the CPA to be included into its registered PoA
14	Additionality of CPAs	Additionality is demonstrated by either approach 1 or approach 2 as described in the PoA DD: Applicability of additionality criteria for micro-scale projects (approach 1) OR Investment barriers described in the PoA-DD also apply for the CPA level (approach 2)	☒	☐	Chosen approach: Approach 1: Calculation in the CPA-DD as demonstrated under Section E.2 of the PoA-DD, showing that CPA remains under 60 GWh thermal energy savings limit: The fulfilment of eligibility criterion 14 is demonstrated by the calculations below. Document for demonstration that end users will be households: Product information sheets from manufacturer
15	SSC Limit for CPAs	The CPA will remain under the thermal threshold of 180 GWh thermal energy savings (threshold as per clarification request SSC_233) throughout the crediting period of the CPA. Please note that not all ICS may have been deployed at CPA inclusion stage, the SSC limit for CPAs can however also be checked during verification, and in case any deployed ICS will be found not in line with CPA SSC Limit for CPAs requirement, those ICS will not be counted for emission reduction calculation.	☒	☐	The estimated maximum number of ICSs is to be defined in the CPA-DD according to the equation provided in Section E.2 of the PoA-DD. The fulfilment of eligibility criterion 15 is demonstrated by the calculations below.

Table 1: Eligibility criteria (EC) for CPA inclusion

Calculations for demonstration of compliance with eligibility criteria 14/15:

The CPA will remain under the limit of small-scale project activity types (annual energy savings below 180 GWh, threshold as per clarification request SSC_233) during every year of the crediting period. The

number of deployed improved cookstoves is recorded in the database. Only the ICS recorded in the database will be part of the CDM programme activity.
The calculation of the maximal number of ICS to be deployed per this CPA in order to remain under the limit is according to the following inequation, as demonstrated in the PoA-DD, Section E.2:

Equation 1

$$180\frac{GWh}{year} > B_{old,appliance} \cdot N_y \cdot (1-\frac{\eta_{old}}{\eta_{new}}) \bullet NCV_{biomass}$$

Parameter	Unit	Description
$B_{old,appliance}$	t	Quantity of woody biomass used in the absence of the project activity in tonnes, per appliance (5.53 t/yr)
N_y	-	Adjusted total number of appliances deployed in period y
η_{old}	%	Efficiency of the baseline system/s being replaced (fraction) (0.1 default value)
η_{new}	%	Efficiency of the system being deployed as part of the project activity (0.52 manufacturer specification value)
$NCV_{biomass}$	TJ/t	Net calorific value of the non-renewable woody biomass that is substituted (IPCC default for wood fuel, 0.015 TJ/tonne, which is 0.004166667 GWh/tonne)

The equation above can be transformed into:

Equation 2

$$N_y < \frac{180\frac{GWh}{year}}{\frac{NCV_{biomass}}{B_{old,appliance} \cdot (1-\frac{\eta_{old}}{\eta_{new}})}}$$

Since N_y, $B_{old,appliance}$ and η_{new} are monitoring parameters whose values will be obtained during verification, an ex-ante estimated limit of ICS numbers is defined here in order to qualify for small scale threshold, according to the equation above. Since efficiency of the new stove when it is new is determined as per eligibility criterion 2, this value will be used. This is conservative since the efficiency of the ICS as determined during monitoring will be equal or lower than the efficiency as defined during

inclusion stage. As for the required parameter $N_{eaters,appliance}$ (to determine $B_{old,appliance}$), the household cap will be used. This is conservative since the number of eaters as determined during monitoring will always be equal or lower than the household cap.
Once the limit of ICS number as defined in the CPA-DD is reached (or before, as deemed appropriate), no additional ICS will be deployed under that CPA.

Following the equation and the values provided above, the total number of stoves to be deployed under this CPA is:

Equation 3

$$N_y < \frac{180\,\frac{GWh}{year}}{\frac{0.0041666\,67\,\frac{\text{GWh}}{\text{t}}}{5.53\,\frac{t}{year}\cdot\left(1-\frac{0.1}{0.52}\right)}}$$

$$N_y < 9{,}663$$

Microscale limit is 1/3 of the small-scale limit and hence to fulfill eligibility criterion 14 the maximum number of stoves that could be deployed per year is 3,221.

The total number of stoves to be deployed per year under this CPA is: 3,200

Please note that ICS deployed refer to the number of ICS operational, not sold. Therefore, it is possible that the number of ICS sold exceeds the number of ICS deployed in cases where replacements are made.

B.3. Assessment and demonstration of additionality of the small-scale CPA , as per eligibility criteria listed in the Registered PoA:

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A typical SSC-CPA consists of several ICS. The installations fall under the authority of the coordinating/managing entity.
As described in section A.4.3 of the PoA-DD, ICS face barriers which are alleviated by CDM. The ICS would therefore not be installed in the absence of the CPA to which they belong. As a result, a typical CPA is additional. As described, CDM helps to overcome the barriers that the coordinating/managing and the CPA implementers are facing to roll out the ICS programme. This clearly stipulates that without the SSC-CDM-PoA, no ICS installations and therefore no CPAs would be implemented.

Consequently, a SSC-CPA can demonstrate the additionality using Approach 1 or Approach 2 given in the Section A.4.3 of the PoA-DD. Additionality of the small scale CDM Project can be demonstrated by showing that the Project would not occurred anyway as per Approach 1 or due to existence of investment barriers as per Approach 2. Description of the barrier at PoA level is provided in section A.4.3. The arguments presented therein are also prevalent in the SSC-CPA Project area. Hence, the SSC-CPA need not re-write the arguments presented therein to support CPA additionality, as, in accordance with EB55 Annex 38 para 6.g,[4] the assessment of additionality of each SSC-CPA to this PoA shall be evaluated on the basis that if the proposed SSC-CPA meet the key criteria and data stipulated in section E.5.2. of the PoA, the SSC-CPA shall be deemed additional.

This CPA uses Approach 1, Demonstration of Additionality of Microscale Project Activities in line with the PoA-DD, Section A.4.3, the number of ICS to be deployed under the CPA remains under the threshold of 20 GWh (corresponding to 60 GWh thermal energy savings) during every year of the crediting period and hence demonstrates additionality. Please refer to eligibility criterion 14 in Section B.2.

B.4. Description of the sources and gases included in the project boundary and proof that the small-scale CPA is located within the geographical boundary of the registered PoA.

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	Source	Gas	Included?	Justification/ Explanation
Baseline	Combustion of non renewable biomass for cooking, Emission Factor for combustion of fossil fuels for cooking	CO2	Yes	Major source of emissions
		CH4	No	Not required by methodology, only CO2 Emission Factor for fossil fuels is considered.
		N2O	No	Not required by methodology, only CO2 Emission Factor for fossil fuels is considered.
Project activity	Combustion of non renewable biomass for cooking, Emission Factor for combustion of fossil fuels for cooking	CO2	Yes	Major source of emissions
		CH4	No	Not required by methodology, only CO2 Emission Factor for fossil fuels is considered.
		N2O	No	Not required by methodology, only CO2 Emission Factor for fossil fuels is considered.

[4] ("definition of eligibility criteria for inclusion of a project activity as a CPA und PoA, which shall include, as appropriate, criteria for demonstration of additionality of the CPA and the type […] of information […] that […] shall be provided by each CPA in order to ensure its eligibility)

Note that the CO_2 Emission factor for the substitution of non-renewable woody biomass by similar consumers must be used to calculate emission reductions according to the methodology AMS II.G., ver. 3 provides a default value of 81.6 tCO2/TJ. This is a conservative assumption, as, compared to the emission factor for wood of 112 t CO_2/TJ (see 2006 IPCC Guidelines for National Greenhouse Gas Inventories, p. 2.23), only 73% of the *de facto* emission reductions when using the improved cookstoves are taken into account.

B.5. Emission reductions:

B.5.1. Data and parameters that are available at validation:

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List of parameters and parametric values that are fixed for all CPAs under this PoA:

Data / Parameter:	$B_{old,capita}$
Data unit:	t/year
Description:	Average baseline fuelwood consumption per capita per year
Source of data used:	UN Statistics Database, Value for 2006; Nigeria Census Data 2006
Value applied:	0.692
Justification of the choice of data or description of measurement methods and procedures actually applied :	The United Nations Statistics Division has published fuelwood consumption figures for households in Nigeria. To arrive at the per capita consumption, this figure is divided by the total population in Nigeria. The population data is taken from official census. Both data are taken from the same, most recent year for consistency reason. See Section E.6.1 of the PoA-DD for details.
Any comment:	

Data / Parameter:	η_{old}
Data unit:	%
Description:	Efficiency of the baseline system being replaced
Source of data used:	AMS II.G. (Ver. 3)
Value applied:	0.10
Justification of the choice of data or description of measurement methods and procedures actually applied :	According to AMS II.G., ver. 3, a default value of 0.10 can be used "if the replaced system is the three stone fire or a conventional system lacking improved combustion air supply mechanism and flue gas ventilation system i.e., without a grate as well as a chimney". See Section E.6.1 of the PoA-DD.
Any comment:	

Data / Parameter:	L_{NRB}
Data unit:	-
Description:	Net-to-gross adjustment factor for NRB Leakage (fixed parametric value of 0.95)
Source of data used:	AMS II.G. (Ver. 03)
Value applied:	0.95
Justification of the choice of data or description of measurement methods and procedures actually applied :	As per the methodology AMS II.G, ver. 3, a default value as provided under par. 13 can be optionally used to account for leakages, in which case surveys are not required. See Section E.6.1 of the PoA-DD for details.
Any comment:	

Data / Parameter:	L_{PoA}
Data unit:	-
Description:	Net-to-gross adjustment factor for PoA Leakage (fixed parametric value of 0.95, AMS II.G. Default Value)
Source of data used:	AMS II.G. (Ver. 03)
Value applied:	0.95
Justification of the choice of data or description of measurement methods and procedures actually applied :	As per the methodology AMS II.G, ver. 3, a default value as provided under par. 23 can be optionally used to account for potential PoA leakages, in which case estimates of the leakage is not required. See Section E.6.1 of the PoA-DD for details.
Any comment:	

Data / Parameter:	$f_{NRB,y}$
Data unit:	-
Description:	Fraction of woody biomass saved by the project activity in period y that can be established as non-renewable biomass
Source of data used:	FAO (2010): Global Forest Resource Assessment 2010, Country Report Nigeria, http://www.fao.org/forestry/20262-1-1.pdf
Value applied:	0.77
Justification of the choice of data or description of measurement methods and procedures actually applied :	Though the NRB assessment comes to the conclusion that 100% of the woody biomass available to the end users is none-renewable, since none of the three conditions outlined in the methodology AMS II.G., ver. 3, par. 9 are fulfilled and hence it cannot be shown that demonstrably renewable woody biomass exists, a lower factor is used to be conservative. See Section E.6.1 of the PoA-DD for details.

Any comment:	

Data / Parameter:	$NCV_{biomass}$
Data unit:	TJ/t
Description:	Net calorific value of the non-renewable woody biomass that is substituted
Source of data used:	AMS II.G (Ver. 3)
Value applied:	0.015
Justification of the choice of data or description of measurement methods and procedures actually applied :	This is the IPCC default value for wood fuel as provided by AMS II.G (Ver. 03), par. 5
Any comment:	

Data / Parameter:	$EF_{projected\_fossilfuel}$
Data unit:	tCO_2/TJ
Description:	Emission factor for the substitution of non-renewable biomass by similar consumers
Source of data used:	AMS II.G (Ver. 3)
Value applied:	81.6
Justification of the choice of data or description of measurement methods and procedures actually applied :	This is the IPCC default value as provided by AMS II.G, ver. 3, par. 5
Any comment:	

List of parameters and parametric values that are determined at time of inclusion of the CPA into the PoA and stay fixed throughout the crediting period of the CPA.

Data / Parameter:	***HH_CAP***
Data unit:	Number
Description:	Maximum number of eaters possible per specific ICS as applied in the specific CPA
Source of data used:	Manufactures specifications
Value applied:	8 (Manufacturer specification for the Save80)
Justification of the choice of data or description of measurement methods and procedures actually applied :	According to manufactures specifications
Any comment:	

Data / Parameter:	$\eta_{specified}$
Data unit:	%
Description:	Efficiency of the system being deployed as per manufacturer specification
Source of data used:	Manufactures specifications
Value applied:	52 (Manufacturer specification for the Save80)
Justification of the choice of data or description of measurement methods and procedures actually applied :	According to manufactures specifications
Any comment:	Note that $\eta_{specified}$ is the efficiency as per manufacturer specification for fulfilling eligibility criterion 2. This value will not be used for ex-post calculation of emission reductions since η_{new} is a monitored parameter to reflect possible changes in efficiency during the lifetime of the ICS.

B.5.2. Ex-ante calculation of emission reductions:

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According to AMS II. G., ver. 3, emission reductions shall be calculated using the following equation:

Equation 4

$$ER_y = B_{y,savings} \cdot f_{NRB,y} \cdot NCV_{biomass} \cdot EF_{projected\_fossilfuel}$$

Parameter	Unit	Description
ER_y	tCO_2	Emission reductions of the project activity in period y
$B_{y,savings}$	t	Quantity of woody biomass that is saved by the CPA in period y
$f_{NRB,y}$	-	Fraction of woody biomass saved by the project activity in period y that can be established as non-renewable biomass (fixed parametric value of 0.77 as per assessment in Section E.6.1 of the PoA-DD)
$NCV_{biomass}$	TJ/t	Net calorific value of the non-renewable woody biomass that is substituted (fixed parametric value of 0.015 TJ/tonne, IPCC default for wood fuel)
$EF_{projected\_fossilfuel}$	tCO_2/TJ	Emission factor for the substitution of non-renewable woody biomass by similar consumers (fixed parametric value of 81.6 tCO_2/TJ, AMS II.G. Default Value)

$B_{y,savings}$ shall be calculated according to the following formula, according to AMS II.G., par. 6, Option 2:

Equation 5

$$B_{y,savings} = B_{old} \cdot (1 - \frac{\eta_{old}}{\eta_{new}})$$

Parameter	Unit		Description
$B_{y,savings}$	t		Quantity of woody biomass that is saved
B_{old}	t		Quantity of woody biomass used in the absence of the project activity
η_{old}	%		Efficiency of the baseline system being replaced (fixed parametric value of 0.1, AMS II.G. Default Value)
η_{new}	%		Efficiency of the system being deployed as part of the project activity (monitored parametric value)

For calculating $B_{y,savings}$ a CPA shall calculate efficiency gains of the improved cook stove compared to the baseline efficiency.
The efficiency testing is based on thermal efficiencies of the baseline and project appliances in terms of share of the energy content of the biomass fuel that is converted into cooking energy. As per the AMS II.G, ver. 3 requirements, the efficiency is determined using the Water Boiling Test (WBT) protocol.[5].

B_{old} shall be calculated according to the following formula (see Section E.6.1 of the PoA-DD for explanation):

Equation 6

$$B_{old} = B_{old,appliance} \cdot N_y \cdot (1 - DO_y) \cdot \frac{mp_{length}}{365} \cdot L_{NRB} \cdot L_{PoA}$$

Parameter	Unit	Description
B_{old}	t	Quantity of woody biomass used in the absence of the project activity
$B_{old,appliance}$	t/year	Quantity of woody biomass used in the absence of the project activity in tonnes, per appliance

[5] See for a description of the protocol for example: http://www.berkeleyair.com/publications/cat_view/42-publications, last accessed 03.05.2011

N_y	-	Adjusted total number of appliances deployed in period y (monitored parametric value)
DO_y	%	Statistically adjusted drop out from total population of appliances in period y (monitored parametric value)
mp_{length}	days	Length of monitoring period y
L_{NRB}	-	Net-to-gross adjustment factor for NRB Leakage (fixed parametric value of 0.95, AMS II.G. Default Value)
L_{PoA}	-	Net-to-gross adjustment factor for PoA Leakage (fixed parametric value of 0.95, AMS II.G. Default Value)

The value $B_{old,appliance}$ is derived from per capita fuelwood consumption as described in Section E.6.1 of the PoA-DD, multiplied with the average number of eaters per appliance as determined during monitoring.
Therefore, $B_{old,,appliance}$ shall be calculated according to the following formula:

Equation 7

$$B_{old,appliance} = B_{old,capita} \cdot N_{eaters,appliance}$$

Parameter	Unit	Description
$B_{old,,appliance}$	t/year	Quantity of woody biomass used in the absence of the project activity in tonnes, per appliance
$B_{old,capita}$	t/year	Average baseline fuelwood consumption per capita per year (fixed parametric value of 0.692 t/year, see Section E.6.1 of the PoA-DD)
$N_{eaters,appliance}$	-	Average number of eaters per project appliance (monitored parametric value, capped as per parameter HH_CAP, see below)

B.5.3. Summary of the ex-ante estimation of emission reductions:

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Year	Estimation of project activity emissions (tCO_2e)	Estimation of baseline emissions (tCO_2e)	Estimation of leakage (tCO_2e)*	Estimation of overall emission reductions (tCO_2e)
2012	0	5,780	N/A	5,780
2013	0	11,270	N/A	11,270
2014	0	10,707	N/A	10,707
2015	0	10,171	N/A	10,171
2016	0	9,663	N/A	9,663
2017	0	9,180	N/A	9,180
2018	0	8,721	N/A	8,721
2019	0	8,285	N/A	8,285
2020	0	7,870	N/A	7,870
2021	0	7,477	N/A	7,477
Total (tonnes of CO2e for the first crediting period)	0	**89,123**	N/A	**89,123**
Average annual tonnes of CO2e for the first crediting period	0	8,912	N/A	8,912

*As per AMS II.G. ver. 3, if Leakage has to be considered then B_{old} is adjusted to account for the quantified leakage. Therefore, leakage emissions shall be considered in the baseline emissions calculation.

B.6. Application of the monitoring methodology and description of the monitoring plan:

B.6.1. Description of the monitoring plan:

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According to AMS II.G (ver. 3), par. 15 and 16, *"Monitoring shall consist of checking the efficiency of all appliances or a representative sample thereof, at least once every two years (biennial) to ensure that they are still operating at the specified efficiency (η_{new}) or replaced by an equivalent in service appliance. Where replacements are made, monitoring shall also ensure that the efficiency of the new appliances is similar to the appliances being replaced.*
Monitoring shall also consist of checking of all appliances or a representative sample thereof, at least once every two years (biennial) to determine if they are still operating or are replaced by an equivalent in service appliance"

Furthermore, according to par. 20, monitoring shall ensure that:

"Either the replaced low efficiency appliances are disposed of and not used within the boundary or within the region; or

If baseline stoves continue to be used, monitoring shall ensure that the fuel-wood consumption of those stoves is excluded from B_{old}."

For this reason, the parameters as stated below are monitored. Whereas N_y is monitored through sales records for all appliances deployed, the other parameters will be determined through sample surveys, as, due to the high number of appliances to be deployed an annual check of operation and efficiency of all appliances is not economically feasible and therefore a sample will be monitored to ensure that all the appliances deployed are still operating or to record end of operation and/or replacement of the appliances, and to check efficiency of the appliances deployed.

This is in line with methodology AMS II.G., ver. 3, par. 22, stating that

"A statistically valid sample of the locations where the systems are deployed, with consideration, in the sampling design, of occupancy and demographics differences can be used to determine parameter values used to determine emission reductions, as per the relevant requirements for sampling in the "General guidelines for sampling and surveys for small-scale CDM project activities". When biennial inspection is chosen a 95% confidence interval and a 5% margin of error requirement shall be achieved for the sampling parameter. On the other hand when the project proponent chooses to inspect annually, a 90% confidence interval and a 10% margin of error requirement shall be achieved for the sampled parameters. In cases where survey results indicate that 90/10 precision or 95/5 precision is not achieved, the lower bound of a 90% or 95% confidence interval of the parameter value may be chosen as an alternative to repeating the survey efforts to achieve the 90/10 or 95/5 precision."

To ensure completeness and accuracy of monitoring information, electronic database(s) will be operated and maintained by the managing entity.

Sales records database(s)

The sales records database will keep information on all appliances deployed, to determine N_y. At least the following information will be recorded:

- Serial number of appliance sold
- Sales date
- CPA-ID: CPA # 1 Improved Cooking Stoves for Nigeria

The information in this database will be updated continuously.

Sample database

The sample database will keep information on all (approach 1, in that case, the sample database and the sales records database are the same) appliances deployed (for sampling methodology, see PoA-DD), to draw sample for the parameters determined via sampling. At least the following information will be recorded:

- Serial number of appliance sold
- Sales date

- CPA-ID: CPA # 1 Improved Cooking Stoves for Nigeria
- User details (Name, State, Local Government Area (LGA), Address if available, etc.)

The information in this database will be updated continuously.

Inspection Database

The Inspection database will keep information on a sub-fraction of appliances deployed, which were selected from the sample database. At least the following information will be recorded:

- Serial number of appliance checked
- CPA-ID: CPA # 1 Improved Cooking Stoves for Nigeria

Information as determined during monitoring:

- Continuous operation of appliance (yes/no) (to determine parameter DO_y,) and/or
- Average N° of eaters per appliance (to determine parameter $N_{eaters\ ,appliance}$) and/or
- Efficiency tested (to determine parameter η_{new})
- Date of the check

The information in this database will be updated for every Monitoring period.

Sampling methodology

To reduce monitoring efforts a single sample is drawn (the Inspection database) based on which all of the parameters determined via sampling shall be monitored. This does not imply that for each of the parameters the same number of users/appliances has to be monitored during sampling. The managing entity will determine the number of users/appliances monitored during sampling for each of the parameters separately. The reason is that the variation within the values obtained will be different for each parameter. Since the precision of a sampled parameter depends on the variation of its values, the necessary number of users/appliances to be monitored in order to achieve the 5% or 10% precision will also depend on the variation of values. Therefore, although the monitoring team will undertake monitoring of various parameters simultaneously and on the same sample, the managing entity may decide to stop monitoring of a particular parameter during the campaign once the required precision for this parameter is achieved. The monitoring team will continue to monitor appliances in the sample with respect to the remaining parameter(s) until again the required precision for these parameters is achieved.

The following steps will be carried out for representative sampling, in consideration of the General Guidelines for sampling and surveys for small-scale CDM project activities (http://cdm.unfccc.int/Reference/Guidclarif/ssc/methSSC_guid20.pdf). For each monitoring period, the following approach 1 will be chosen.

Approach 1: Multistage sampling with sales record database = sample database (in terms of number of cases)

Step 1: For each monitoring period *y* contact details from users are collected. In this case the sales record database is equal to the sample database. In order to obtain a final representative selection (Inspection database), the following steps are undertaken:

Step 2: In order to reflect the different age of the ICS (i.e. the different deployment dates), the relative share of appliance vintages within the total population of appliances deployed as recorded in the sales record database under the CPAs shall be established. At least one ICS per Monitoring Period shall be part of the final selection, if any ICS were sold in this Monitoring Period. Example: If after the second monitoring period, 75% of all appliances were deployed until the end of the first Monitoring Period, and 25% were deployed until the end of the second Monitoring Period, than the final selection shall also represent that share.

Step 3: A sample of administrative clusters (e.g. LGAs, Local Government Areas) is selected for each monitoring period *y* from the sample database by "probability proportional to size"-sampling, i.e. clusters with a higher number of appliances deployed will have a higher chance to be selected than those with a smaller number of appliances.

Step 4: A fixed number of users within the selected clusters will be randomly selected by means of a computerized randomizer. The number of users to be selected shall be equal for all clusters.

Other sampling methods which may be more practical and cost effective may alternatively be used, while considering the most recent General Guidelines for sampling and surveys for small-scale CDM project activities (http://cdm.unfccc.int/Reference/Guidclarif/ssc/methSSC_guid20.pdf). If this is the case, the DOE will have to verifiy at verification stage that the sampling method was statistically sound and as robust as the approaches presented in this PoA-DD.

Organisational structure of sampling

Person	Role
Managing Entity database administrator	The database administrator is responsible for updating and maintaining all electronic databases.
Monitoring team	The monitoring team will be assigned by the CME to conduct the user interviews and appliance tests during the periodic sampling and reports the results to the database administrator.

Random distribution

The method of selecting users to be included in the sample databases for deployed appliances will be random (in case of approach 2, in case of approach 1 all users will be included in the sample database). The method of selecting users for the inspection database for checks will be random. All random selections will be stored for the crediting period and an additional two years. Therefore, traceability of the selection is provided.

Representative sampling
It shall be assured that the sample database is always statistically representative for the respective appliance vintages. For all parameters that are monitored via sampling it is understood that only the ICS age has an influence. Therefore, no geographic representativeness is deemed necessary for the selection of users participating in these sample groups.

Interviews and tests
The periodical inspection checks will be performed by user interviews and appliance tests. Only persons that are of legal age will be interviewed.

Training
The managing entity will provide training or second trainers to the monitoring team and to the distributors to ensure accuracy and completeness of data recorded.

Monitoring report to be provided to Verification Entity:
The managing entity is responsible for preparing the Monitoring Report with the support of the monitoring team.

Procedure for QA/QC
Data collected and processed by the field staff will be checked regularly by the CME or a person dedicated by the CME.

List of parameters to be monitored:

Data / Parameter:	$N_{eaters,appliance}$
Data unit:	-
Description:	Average number of eaters per appliance
Source of data used:	Primary data collection: dedicated monitoring team; database maintenance: managing entity
Value of data applied for the purpose of calculating expected emission reductions in section B.5	8 (Manufacturer specification)
Description of measurement methods and procedures to be applied::	Monitoring of the statistically adjusted average number of eaters involves two steps: Step 1: Sample survey amongst appliances of the same type deployed under CPAs of the PoA as specified in section E.7.2 of the PoA-DD Step 2: Calculation of the average number of eaters at confidence level and precision as required by the methodology (AMS II.G. ver. 3) for the

	inspection frequency chosen, following the statistical standard approach for a homograde test of independent units that have a standard normal distribution. The average number of eaters will be determined through interviews performed by a dedicated monitoring team according to the sampling procedure described in section E.7.2 of the PoA-DD. Interviews will be reported in a questionnaire. Interviews are conducted until the required precision for this parameter is achieved. All questionnaires and information gathered during the sampling by the monitoring team are handed over to the managing entity that takes care of entering the information to an electronic database and updating databases where appropriate. By determining the average number of eaters per appliance, the continuous use of the baseline appliance is considered as only the baseline consumption which is reduced by the project appliance is considered. See Section E.6.1, Step 1.1.1 of the PoA-DD for details.
QA/QC procedures to be applied:	All formulas applied to determine the statistical precision used are standard formula. Furthermore, according to AMS II.G (ver. 3), par.22 the sampling error has to be deducted (*"...the lower bound of a [...] confidence interval of the parameter value may be chosen"*) in the event that the required precision could not be achieved because of a small sample size. No deductions have to be made if the precision is achieved by sampling a proper number of appliances. Data will be collected using the standard procedures and will be kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later.
Any comment:	

Data / Parameter:	N_y
Data unit:	-
Description:	Adjusted total number of appliances deployed until period y
Source of data to be used:	Sales Records Database
Value of data applied for the purpose of calculating expected emission reductions in section B.5	Indicative schedule as outlined in Section A.2:

Period	**Average N° of SAVE80 systems deployed**
2012	1,600
2013	3,120
2014	2,964

	2015: 2,816 2016: 2,675 2017: 2,541 2018: 2,414 2019: 2,293 2020: 2,179 2021: 2,070
Description of measurement methods and procedures to be applied:	The total number of appliances deployed until period y is calculated based on information monitored through the sales records database.

$$N_y = \sum_{i=1}^{y} n_i \cdot OT_{adjusted,i,y}$$

Parameter	Unit	Description
n_i	-	Number of appliances deployed in period i as reported in the sales records database and adjusted to account for delays between sales date and first use. Every appliance starts to operate (deployment date) in the month following the month in which the appliance was sold.
$OT_{adjust,i,y} = \begin{cases} 1 & ,i < y \\ \frac{d_{average,y}}{mp_{length}} & ,i = y \end{cases}$	-	Adjustment factor for reduced operational time of appliances deployed in monitoring period y, whereas i = 1, …, y. For all appliances deployed in the periods *i* prior to Monitoring period *y*, the adjustment factor is 1.
$d_{average,y}$	days	Average number of days that appliances deployed in period y have been operational in period y as determined by respective deployment dates of appliances counted for n_y . Deployment dates are determined mutatis mutandis as in the context of n_i above.
mp_{length}	days	Length of monitoring period y

QA/QC procedures to	Data will be collected using the standard procedures and will be kept for two

be applied:	years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later.
Any comment:	Due to the fact that not all ICSs have been deployed at CPA validation stage, CME has also indicated that the 'type and number of ICS deployed' will be checked during verification, and in case any installed ICS type will be found not in line with the numbering requirement, those ICS will not be counted for emission reduction calculation.

Data / Parameter:	DO_y
Data unit:	%
Description:	Statistically adjusted drop out from total population of appliances in period y Drop out means that the ICS are either not used, outside of the project boundary (i.e. outside Nigeria) or damaged beyond repair.
Source of data to be used:	Primary data collection: dedicated monitoring team; database maintenance: managing entity
Value of data applied for the purpose of calculating expected emission reductions in section B.5	5%
Description of measurement methods and procedures to be applied:	Monitoring of the statistically adjusted drop out involves two steps: Step 1: Sample survey amongst appliances of the same type deployed under CPAs of the PoA as specified in section E.7.2 of the PoA-DD Step 2: Calculation of the adjusted drop out rate at confidence level and precision as required by the methodology (AMS II.G. ver. 3) for the inspection frequency chosen, following the statistical standard approach for a homograde test of independent units that have a standard normal distribution. The Drop outs will be determined through interviews where it will be checked if the appliances are still operational, performed by a dedicated monitoring team according to the sampling procedure described in section E.7.2 of the PoA-DD. Interviews will be reported in a questionnaire. Checks are conducted until the required precision for this parameter is achieved. All questionnaires and information gathered during the sampling by the monitoring team are handed over to the managing entity that takes care of entering the information to an electronic database and updating databases where appropriate.
QA/QC procedures to be applied:	All formulas applied to determine the statistical precision used are standard formula. Furthermore, according to AMS II.G (ver. 3), par.22 the sampling error has to be deducted (*"...the lower bound of a […] confidence interval of the*

	parameter value may be chosen") in the event that the required precision could not be achieved because of a small sample size. No deductions have to be made if the precision is achieved by sampling a proper number of appliances. Data will be collected using the standard procedures and will be kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later. A traceable "identity check" of the appliances visited during sampling shall be performed and recorded (e.g. a picture of the appliance clearly showing its serial no., etc.).
Any comment:	

Data / Parameter:	η_{new}
Data unit:	%
Description:	Adjusted average efficiency of the system being deployed
Source of data to be used:	Primary data collection: dedicated monitoring team; database maintenance: managing entity
Value of data applied for the purpose of calculating expected emission reductions in section B.5	52% (Manufacturer specification for the Save80)
Description of measurement methods and procedures to be applied:	Monitoring of the statistically adjusted average efficiency involves two steps: Step 1: Sample survey amongst appliances of the same type deployed under CPAs of the PoA as specified in section E.7.2 of the PoA-DD. Step 2: Calculation of the average efficiency at confidence level and precision as required by the methodology (AMS II.G. ver. 3) for the inspection frequency chosen, following the statistical standard approach for a heterograde test of independent units that have a standard normal distribution. η_{new} is determined following the Water Boiling Test (WBT), performed by a dedicated monitoring team according to the sampling procedure described in section E.7.2 of the PoA-DD. Tests will be reported in spreadsheet templates. Checks are conducted until the required precision for this parameter is achieved.
QA/QC procedures to be applied:	All formulas applied to determine the statistical precision are standard formula. Furthermore, according to AMS II.G (ver. 3), par.22 the sampling error has to be deducted (*"...the lower bound of a [...] confidence interval of the parameter value may be chosen"*) in the event that the required precision could not be achieved because of a small sample size. No deductions have to be made if the precision is achieved by sampling a proper number of appliances.

	Data will be collected using the standard procedures and will be kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later. A traceable "identity check" of the appliances visited during sampling shall be performed and recorded (e.g. a picture of the appliance clearly showing its serial no., etc.). Cross-checks: The monitoring team will cross-check results with the efficiency as determined at CPA inclusion stage. Additionally, literature values may also be used to compare the results. .
Any comment:	

C.1. Please indicate the level at which environmental analysis as per requirements of the CDM modalities and procedures is undertaken. Justify the choice of level at which the environmental analysis is undertaken:

☑ Please tick if this information is provided at the PoA level. In this case sections C.2. and C.3. need not be completed in this form.

C.2. Documentation on the analysis of the environmental impacts, including transboundary impacts:

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C.3. Please state whether an environmental impact assessment is required for a typical CPA, included in the programme of activities (PoA), in accordance with the host Party laws/regulations:

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-

SECTION D. Stakeholders' comments

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D.1. Please indicate the level at which local stakeholder comments are invited. Justify the choice:

☑ Please tick if this information is provided at the PoA level. In this case sections D.2. to D.4. need not be completed in this form.

D.2. Brief description how comments by local stakeholders have been invited and compiled:

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-

D.3. Summary of the comments received:

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-

D.4. Report on how due account was taken of any comments received:

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-

Annex 1

CONTACT INFORMATION ON ENTITY/INDIVIDUAL RESPONSIBLE FOR THE SMALL-SCALE CPA

Organization:	atmosfair gGmbH
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Annex 2

INFORMATION REGARDING PUBLIC FUNDING

There is no public funding of the CPA. All subsidies for the project are stemming from CDM revenues.

Annex 3

BASELINE INFORMATION

Annex 4

MONITORING INFORMATION

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