




Verification and certification report form for CDM programme of activities
(version 01.0)

Complete this form in accordance with the "Attachment. Instructions for filling out the verification and certification report form for CDM programme of activities" at the end of this form.

VERIFICATION AND CERTIFICATION REPORT

Title of the programme of activities (PoA)	Improved Cook Stove Programme with Carbon Finance (ICF), Nepal	
UNFCCC reference number of the PoA	UNFCCC ID: POA 9811 TN P-No.: 8000446940 – 15/046	
Version number(s) of the PoA-DD(s) applicable to this report	6.0	
Version number of the verification and certification report	1.0	
Completion date of the verification and certification report	04/10/2015	
Monitoring period number	1	
Duration of this monitoring period	19/12/2013 - 01/04/2015 (First and last day included)	
Number and version number of the monitoring report to which this report applies	3.0	
Coordinating/managing entity (CME)	SNV Netherlands Development Organisation (SNV), Nepal	
Host Party(ies)	Host Party(ies) of the PoA	Is this a host Party to a CPA covered in this report? (yes/no)
	Federal Democratic Republic of Nepal	No
Sectoral scope(s)	Sectoral scope 3: Energy demand	
Selected methodology(ies)	AMS-II.G, version 05.0	
Selected standardized baseline(s)	NA	
Total estimated GHG emission reductions or net GHG removals for this monitoring period in the included CPA(s) covered in	CPA	Value estimated ex ante
	9811-0001	53,436 tCO ₂ e
	9811-0002	11,849 tCO ₂ e
	Total	65,286 tCO ₂ e

this report									
Total certified GHG emission reductions or net GHG removals for this monitoring period for the included CPA(s) covered in this report	<table border="1"> <tr> <th>CPA</th><th>ER</th></tr> <tr> <td>9811-0001</td><td>40,543 tCO₂e</td></tr> <tr> <td>9811-0002</td><td>6,446 tCO₂e</td></tr> <tr> <td>Total</td><td>46,988 tCO₂e</td></tr> </table>	CPA	ER	9811-0001	40,543 tCO ₂ e	9811-0002	6,446 tCO ₂ e	Total	46,988 tCO ₂ e
CPA	ER								
9811-0001	40,543 tCO ₂ e								
9811-0002	6,446 tCO ₂ e								
Total	46,988 tCO ₂ e								
Name of DOE	TÜV NORD CERT GmbH								
Name, position and signature of the approver of the verification and certification report	 Evgeni Sud Final Approver								

SECTION A. Executive summary

SNV Netherlands Development Organisation (SNV), Nepal has commissioned the TÜV NORD JI/CDM Certification Program to carry out the 1st periodic verification of the CDM Programme of Activities (CDM-PoA):

“Improved Cook Stove Programme with Carbon Finance (ICF), Nepal”

with regard to the relevant requirements for CDM PoAs.

This verification covers the period from 19/12/2013 to 01/04/2015 (including both days).

The project reduces GHG emissions due to introduction of efficient and improved cook stoves in Far Western Districts Regions (FWDR) in Nepal. The PoA aims to significantly reduce fuel wood consumption of low-income Nepalese households by providing them with affordable improved cooking stoves (ICS) in replacement to their low-efficiency, unimproved traditional stoves. The ICS disseminated by the PoA are more efficient than existing traditional cookstoves. This results in a reduction of the quantity of wood fuel that each household must consume to meet their cooking needs. Thus, the CPAs under the PoA achieve a reduction in the emissions of greenhouse gases and have significant socio-economic and environmental benefits, including contribution to the reduction of deforestation and degradation of forests in the FWDR through wide and voluntary participation of the people in adopting fuel efficient stoves potentially reaching thousands of rural poor who are at the bottom of the energy ladder in Nepal.

Details of the PoA location are given in table A-1 below:

Table A-1: Project Location

No.	Project Location		
CPA # 1 & CPA #02			
Host Country	Federal Democratic Republic of Nepal		
Region:	Far Western Development Region (FWDR)		
Project location address:	Districts of Doti, Dadeldhura, Baitadi, Achham, Darchula, Bajhang, and Bajura		
Geo-coordinates	District	Latitude	Longitude
	Doti	N 29 13.230	E 80 53.857
	Dadeldhura	N 29 14.596	E 80 30.044
	Baitadi	N 29 31.155	E 80 28.125
	Accham	N 29 04.378	E 81 15.611
	Darchula	N 29 54.440	E 80 45.783
	Bajhang	N 29 47.865	E 81 15.363
	Bajura	N 29 38.562	E 81 36.292

Basic technical details of the PoA are summarized in table A-2.

Table - A-2: Technical data of the project activity for ICS:

Parameter	Unit	Value
Stove type: RS 1.1		
Combustion chamber thickness (steel)	mm	2
Diameter of combustion chamber (steel)	cm	10.8
Fuel type	-	Firewood
Thermal efficiency (η_{new})	%	29.53
Top plate pot rest thickness (steel)	mm	5

Parameter	Unit	Value
Stove type: RS 1.3		
Combustion chamber thickness (steel)	mm	2
Diameter of combustion chamber (steel)	cm	10.7
Fuel type	-	Firewood
Thermal efficiency (η_{new})	%	26.69
Top plate pot rest thickness (steel)	mm	5

Parameter	Unit	Value
Stove type: RS 3.1 (this technology is not credited under the current monitoring period)		
Combustion chamber thickness (ceramic)	mm	20
Diameter of combustion chamber (ceramic)	mm	9.5
Fuel type	-	Firewood
Thermal efficiency (η_{new})	%	28.50
Top plate pot rest thickness (steel)	mm	5

As a result of this verification, the verifier confirms that:

- all operations of the project are implemented and installed as planned and described in the validated project design document.
- the monitoring plan is in accordance with the applied approved CDM methodology, i.e., AMS II.G. ver. 5
- the installed equipment essential for measuring parameters required for calculating emission reductions are calibrated appropriately.
- the monitoring system is in place and functional. The project has generated GHG emission reductions.

As the result of the 1st periodic verification, the verifier confirms that the GHG emission reductions are calculated without material misstatements in a conservative and appropriate manner. TÜV NORD JI/CDM CP herewith confirms that the project has achieved emission reductions in the above mentioned reporting period as follows:

Emission reductions: 46,988 t CO₂e

SECTION B. Verification team, technical reviewer and approver**B.1. Verification team members**

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk review	On-site inspection	Interview(s)	Verification findings
1.	Team Leader/ Technical Expert	EI	Mishra	Prakash Kumar	-	x	x	x	x

B.2. Technical reviewer and approver of the verification and certification report

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer	IR	Winter	Stefan	TÜV NORD CERT
2	Technical reviewer	IR	Stöhr	Christina	TÜV NORD CERT
3	Approver	IR	Sud	Evgeni	TÜV NORD CERT

SECTION C. Means of verification**C.1. Desk review**

During the desk review all documents initially provided by the client and publicly available documents relevant for the CPA#01 and CPA#02 verification were reviewed. The main documents are listed below:

- the last revision of the PoA-DD including the monitoring plan^{/PoA-DD/},
- the last revisions of the CPA-DDs
- the last revision of the validation report^{/VAL/},
- CPA inclusion reports
- documentation of validation which are relevant during verification^{/VAL/}
- the emission reduction calculation spreadsheet^{/XLS/}.

Other supporting documents, such as publicly available information on the UNFCCC website and background information were also reviewed. List of all the relevant documents reviewed during verification process are listed in Appendix 3.

C.2. On-site inspection

Duration of on-site inspection: 25/06/2015 to 30/06/2015				
No.	Activity performed on-site	Site location	Date	Team member
1.	<ul style="list-style-type: none"> • Formal Introduction with CME, CPA implementer and other involved personnel in GHG data monitoring, discussion on audit planning, site lay out. • Record keeping. • Sales receipt verification • Double counting avoidance procedure 	FWDR Region of Nepal (Dadeldhura SNV office)	25/06/2015	Prakash Kumar Mishra, CME (SNV) representative, CPA implementer (CRT/N), involved personnel and othes

Duration of on-site inspection: 25/06/2015 to 30/06/2015				
No.	Activity performed on-site	Site location	Date	Team member
	<ul style="list-style-type: none"> Interviews of the CME, PO and sales personnel Master data verification Competency of the PO and involved personnel. Overall organizational structure for data management and flow of information Meeting and interview with third party survey agency on procedure adopted for sampling and survey 			
2	Onsite verification of deployed stoves, interview with the ICS users on related issues, e.g. usage pattern, whether baseline 3 stone stoves are still in use, fuel saving, awareness level, maintenance procedure wood consumption etc.	FWDR region	26/06/2015	Prakash Kumar Mishra
3	Onsite verification of deployed stoves, interview with the ICS users on related issues, e.g. usage pattern, whether baseline 3 stone stoves are still in use, fuel saving, awareness level, maintenance procedure wood consumption etc.	FWDR region	27/06/2015	Prakash Kumar Mishra/CME/PP
4	Onsite verification of deployed stoves, interview with the ICS users on related issues, e.g. usage pattern, whether baseline 3 stone stoves are still in use, fuel saving, awareness level, maintenance procedure wood consumption etc.	FWDR region	28/06/2015	Prakash Kumar Mishra/ CME/PP
5	Onsite verification of deployed stoves, interview with the ICS users on related issues, e.g. usage pattern, whether baseline 3 stone stoves are still in use, fuel saving, awareness level, maintenance procedure wood consumption etc.	FWDR region	29/06/2015	Prakash Kumar Mishra/CME/PP
6	<ul style="list-style-type: none"> Discussion on Monitoring report compliance with MR filling guideline, PoA DD, CPA DDs, Validation report Documentary evidence check, data verification and comparison with onsite observation 	FWDR region	30/06/2015	Prakash Kumar Mishra/CME/PP/Consultant

C.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Dhakal	Subash	SNV Nepal	25/06/2015	Program overview and Organisation structure	Team Leader
2	Meyrick M	Mark	Eneco Energy		Carbon financing and programme overview	Head of Carbon

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
3	Thapa	Rajan	CRT/N		CPA implemetaion overview	Team Leader
4	O'Neil	Megan	Consultant	25/06/2015	Development of MR and related documentation for CPA01 and CPA02 verification	
5	Srestha	Bikash	RDSC	25/06/2015	Procedure and mechanism followed during usage survey	
6	Rawal	Ganesh	RDSC	25/06/2015	QA/QC followed during survey	TC/QA
7	Kunwar	Yagyaman	RDSC	25/06/2015	Usage survey related	ATC
8	Ghimire	Bhagirath	CRTN	25/06/2015	CPAs implemetaion	DTC
9	Kathayat	Ganeshbahadur	RDSC	25/06/2015	Survey related	
10	Khadim	Keshav	CRT/N	25/06/2015	CPAs implemetaion	
11	Budhathoki	Toranbahadur	CRT/N	25/06/2015	CPAs implemetaion	
12	Kumar	Shyam	CRT/N	25/06/2015	CPAs implemetaion	
13	Madai	Raghubir	CRT/N	25/06/2015	CPA implementation and monitoring	Promoter
14	Singh Mehta	Rup	Asian Metal Power udyog	28/05/2015	ICS manufacturing procedure and agreement related	
15	Chalfse	Baikuntha	SNV, Nepal	28/05/2015	Programme monitoring	
16	Bika	Purnbahadur	ICS user	26/05/2015	ICS information	
17	Koli	Setu	ICS user	26/05/2015	ICS information	
18	Koli	Devbahadur	ICS user	26/05/2015	ICS information	
19	Koli	Luxman	ICS user	26/05/2015	ICS information	
20	Vishwakarma	Dhanbahadur	ICS user	26/05/2015	ICS information	
21	Aidi	Balbahadur	ICS user	26/05/2015	ICS information	
22	Buda	Khadagbahadur	ICS user	26/05/2015	ICS information	
23	Buda	Narayan	ICS user	26/05/2015	ICS information	
24	Buda	Karnbahadur	ICS user	26/05/2015	ICS information	
25	Buda	Bhanbahadur	ICS User	27/05/2015	ICS information	
26	Buda	Dhanbahadur	ICS User	27/05/2015	ICS information	
27	Buda	Tularam	ICS User	27/05/2015	ICS information	
28	Buda	Amar	ICS User	27/05/2015	ICS information	
29	Kunwar	Gajbahadur	ICS User	27/05/2015	ICS information	
30	Kunwar	Dhanbahadur	ICS User	27/05/2015	ICS information	
31	Kunwar	Danbahadur	ICS User	27/05/2015	ICS information	
32	Kunwar	Narendrabahadur	ICS User	27/05/2015	ICS information	
33	Bohara	Bhuwaneshwari	ICS User	27/05/2015	ICS information	
34	Buda	Mathura Devi	ICS User	27/05/2015	ICS information	
35	Madai	Parvati	ICS User	27/05/2015	ICS information	
36	Madai	Chhavilal	ICS User	27/05/2015	ICS information	
37	Bohara	Jagat	ICS User	27/05/2015	ICS information	
38	Saud	Amrita	ICS User	28/05/2015	ICS information	
39	Ramaya	Shankar	ICS User	28/05/2015	ICS information	
40	Pahari	Dani	ICS User	28/05/2015	ICS information	

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
41	Pahari	Puranlal	ICS User	28/05/2015	ICS information	
42	Mohara	Sher Singh	ICS User	28/05/2015	ICS information	
43	Mohara	Dan Singh	ICS User	28/05/2015	ICS information	
44	Mohara	Jagdish	ICS User	28/05/2015	ICS information	
45	Sharki	Tulsi Devi	ICS User	29/05/2015	ICS information	
46	Sharki	Mata Devi	ICS User	29/05/2015	ICS information	
47	Sharki	Chandra Bahadur	ICS User	29/05/2015	ICS information	
48	Sharki	Sita Devi	ICS User	29/05/2015	ICS information	
49	Sharki	Bahadur Singh	ICS User	29/05/2015	ICS information	
50	Sharki	Indra Bahadur	ICS User	29/05/2015	ICS information	
51	Sharki	Padam Bahadur	ICS User	29/05/2015	ICS information	
52	Sharki	Samjhana	ICS User	29/05/2015	ICS information	
53	Karki	Indra Bahadur	ICS User	29/05/2015	ICS information	
54	Chand	Dewani	ICS User	29/05/2015	ICS information	
55	Chand	Shankar	ICS User	29/05/2015	ICS information	
56	Budthapa	Hansa Bahadur	ICS User	29/05/2015	ICS information	
57	Nepali	Prem	ICS User	29/05/2015	ICS information	
58	Aidi	Dhan Bahadur	ICS User	29/05/2015	ICS information	
59	Badaila	Jay	ICS User	29/05/2015	ICS information	
60	Bhul	Kalu Devi	ICS User	29/05/2015	ICS information	
61	Saud	Nirmala Devi	ICS User	30/05/2015	ICS information	
62	B K	Pashupati	ICS User	29/05/2015	ICS information	
63	B.K	Kausi	ICS User	29/05/2015	ICS information	
64	Bista	Bhaga	ICS User	29/05/2015	ICS information	
65	Tamata	Jogi	ICS User	29/05/2015	ICS information	
66	Parki	Riule	ICS User	29/05/2015	ICS information	
67	Bista	Jamuna	ICS User	29/05/2015	ICS information	
68	Tamata	Tara Devi	ICS User	29/05/2015	ICS information	
69	Tamata	Kamali Devi	ICS User	29/05/2015	ICS information	
70	Tamata	Kali Devi	ICS User	29/05/2015	ICS information	
71	Tamata	Kalawati	ICS User	29/05/2015	ICS information	
72	Tamata	Naru Devi	ICS User	29/05/2015	ICS information	
73	BK	Timure	ICS User	29/05/2015	ICS information	
74	Pariyar	Ramesh	ICS User	29/05/2015	ICS information	
75	BK	Bhagi	ICS User	29/05/2015	ICS information	
76	Bhul	Padam	ICS User	29/05/2015	ICS information	
77	BK	Dhadi	ICS User	29/05/2015	ICS information	
78	BK	Rangi	ICS User	29/05/2015	ICS information	
79	Bista	Kamali	ICS User	29/05/2015	ICS information	
80	Nepali	Kalu	ICS User	29/05/2015	ICS information	
81	Bhat	Harjit	ICS User	29/05/2015	ICS information	
82	Bista	Harina	ICS User	29/05/2015	ICS information	
83	Bogati	Jul Devi	ICS User	29/05/2015	ICS information	

C.4. Sampling approach

C.4.1 Sampling during monitoring

<input type="checkbox"/>	No sampling approach has been used by the PP to determine the monitored parameters				
<input checked="" type="checkbox"/>	A sampling approach has been taken for the following monitored parameter(s):				
	Parameter	Sampling approach ¹⁾	Sampling Type ²⁾	Total Population	Sample Size by PP
	SOF	MSS	PS	34,089	395
	f_{old}	MSS	PS	34,089	330
	$\eta_{new,y}$	MSS/StRS	PS	34,089	36

¹⁾ Sampling Approaches:

SiRS: Simple Random Sampling
 StRS: Stratified Random Sampling
 SS: Systematic Sampling
 CS: Cluster Sampling
 MSS: Multi-stage Sampling

²⁾ Sampling Types:

PS: Parameter Sampling

The CME selected a sample of ICS to monitor from the PoA Distribution and Monitoring Database, containing the population of CPA # 01 and CPA # 02. A multi-stage sampling has been applied in line with the Guideline: Sampling and Surveys for CDM Project Activities and Programme of Activities, version 03.0 (EB 75, Annex 8) and registered PoA-DD. Multistage sampling is a more complex form of cluster sampling and involves sampling from a number of groups (known as primary sampling units), and then going on to sample units within each group (known as secondary sampling units). The primary sampling unit is Village Development Committee (VDC)¹ and the secondary sampling unit is the ICS.

For all parameters, the primary unit or VDC is randomly selected by “probability proportional to size”-sampling, i.e. VDCs with a higher number of appliances deployed have a higher chance to be selected than those with a smaller number of appliances. For sampling SOF and f_{old} , ICS are selected randomly within each VDC using a random number generator. For sampling η_{new} , units in the secondary sampling unit, i.e. the ICS, were selected proportionally to the total distribution of each stove type, similar to a stratified sampling approach (Survey Sample Selection^{/ANN-9/}).

The CME hired a third party consultant to conduct the sample size calculations and select samples for all monitored parameters (Sample Size Calculation)^{/ANN-8/}. SNV hired the RPO, RDSC, to conduct the Usage Survey^{/AGGR/}, by visiting the end user premises where the selected ICS are located to conduct a sufficient number of surveys for monitored parameters, SOF and f_{old} according to the estimated sample size (Usage Survey Report)^{/ANN-3/}. SNV hired third party contractor, Rural Energy Testing Station (RETS), to conduct sampling for monitored parameter η_{new} by visiting sampled ICS and conducting a sufficient number of water boiling tests (WBTs) according to the estimated sample size (WBT Report)^{/ANN-6/}.

Out of total 34,089 stoves under CPA #01 and CPA #02, CME has selected sample of 395 stoves in coherence with Guidelines for Sampling and Surveys for CDM Project Activities and Programme Activities” (Version 03.0) and “Standard for Sampling and Surveys for CDM Project Activities and Programme Activities” (version 4.1)^{/G-SS/}. PP has applied multistage sampling- proportional parameter at 95/10 confidence/precision and calculated the sample size as per equation stipulated in EB 75

¹ A village development committee (VDC) in Nepal is the lower administrative part of its local development ministry. Each district has several VDCs, similar to municipalities but with greater public-government interaction and administration. There are 3,913 village development committees in Nepal. A VDC is further divided into wards, the number depending on the population of the district. [Source: http://mofald.gov.np/mld/uploadedFiles/allFiles/LSGA_1999_Eng.pdf]

Annex 08, version 03.0, p. 40, Equation (55)^{/G-SS/}. A sample size calculation spread sheet^{/ANN-8/} along with Survey Sample Selection spread sheet^{/ANN-9/} have been submitted by the PP. Verification team has assessed these spread sheet read with the registered sampling plan in the PoA-DD, applied methodology and Standard and guidelines for Sample and Survey, and found that sampling and survey conducted by the PP is reasonable and appropriate.

C.4.2 Sampling approaches during verification

<input type="checkbox"/>	No sampling approach has been used by the VT to verify the monitored parameters				
<input checked="" type="checkbox"/>	A sampling approach has been applied by the VT for the following monitored parameter(s):				
	Parameter	Sampling approach ¹⁾	Sampling Type ²⁾	Sample survey Population by PP	Sample survey by VT
	SOF	SiRS	AS	395	67
	f_{old}	SiRS	AS	300	67
	$\eta_{new,y}$	SiRS	AS	36	67

¹⁾ Sampling Approaches:

SiRS: Simple Random Sampling
 StRS: Stratified Random Sampling
 SS: Systematic Sampling
 CS: Cluster Sampling
 MSS: Multi-stage Sampling

²⁾ Sampling Types:

AS: Acceptance Sampling
 PS: Parameter Sampling
 COM: Full data check at higher data aggregation levels and sampling at original data levels

During the on-site verification, a sampling approach has been followed by the verification team to verify the reported values for the monitored parameters of SOF, f_{old} , $\eta_{new,y}$, N_{all} , $N_{y,I}$, N_{CPA} , $E_{Saving,appliance}$ and $f_{NRB,y}$.

The sampling approach is conducted according with "Guidelines for Sampling and Surveys for CDM Project Activities and Programme Activities" and the "Standard for Sampling and Surveys for CDM Project Activities and Programme Activities". As the population is relatively homogeneous with respect to the object of the sampling effort, simple random sampling method is adopted for verification of the parameters.

Since the CPAs included in the PoA implements technologies/measures with high degree of standardization and the stove capacities in terms of energy savings per year in the CPAs are smaller than 1% of small scale CDM thresholds, the verification team decided to draw samples mainly from the project samples selected by PP. i.e. the acceptance sampling approach has been applied.

However, due to Nepal's on ground situation has been quite difficult after a major earthquake, in later April until May-June 2015 (aftershocks)². Due to this natural disaster and heavy rain fall and landslides afterward, it was very difficult to access/reach every household as planned before the onsite inspection. Moreover, verification team has tried the best way possible to verify the samples on site in limited time and could approach around 67 samples in total and applied the standard audit technique for data verification including the verification sampling approach and sampling results obtained by the CME/CPA implementer during the current monitoring period.

$f_{NRB,y}$ is taken from the National value for Nepal approved by UNFCCC³ and by the Ministry of Environment, Science and Technology of Nepal.

² <https://sandrp.wordpress.com/2015/05/05/nepals-everest-sinking-7-9-earthquake-april-25-2015-himalayan-warning/>

³ <http://cdm.unfccc.int/DNA/fNRB/index.html>

Sample Size Calculation

According to “Best practices examples focusing on sample size and reliability calculations”, the following equation is applied for sample size calculation.

$$n \geq \frac{z^2 \times N \times V}{(N - 1) \times \text{precision}^2 + z^2 \times V}$$

Where:

$$V = \frac{p \times (1 - p)}{p^2}$$

n	Number of elements to be sampled.
N	Total number of elements in the population, (see table below for each of the parameters)
p	Proportion: Set to 0.5 based on the very conservative estimation that 50% of the values checked are found to be incorrect.
z	Constant referring to the level of confidence (for this case 1.96 for 95% as per Guideline for Sampling and Surveys Appendix 1 §9 for SSC project activities).
precision	Required precision (for this case 10%=0.1 as per Guideline for Sampling and Surveys Appendix 1 §9 for SSC project activities).

The following table provides the background information and how many samples of main monitoring parameter of the project activity are actually have been checked:

Parameter	Population	Maximum number of sample to be checked according to random sampling	Actual number of sample checked
SOF	395 ⁴	62	67
f _{old}	300	73	67
n _{new,y}	36	9	5

a. Parameter SOF

According to the values above and the conservative estimation of 50% wrong values the maximum number of values to be checked for the population of ICS in the program (395) for parameter stove operation factor (SOF) would be as following:

The details calculation for sample size for the “SOF” parameter is :

$$n \geq \frac{1.96^2 \times 395 \times \frac{0.84 \times (1 - 0.84)}{0.84^2}}{(395 - 1) \times 0.1^2 + 1.96^2 \times \frac{0.84 \times (1 - 0.84)}{0.84^2}} = 61.868$$

Rounding up, the sample size for verification of these populations is 62.

During the on-site verification, 67 ICS could verify and the verification team interviewed end users. Hence, more than the required numbers for the sample have been verified. Based on the values from the usage survey report^{/ANN-3//ANN-4/}, based on the underlying original data^{/ANN-10/}, sample size calculation^{/ANN-8-9/} and interview outcome, the verification team calculated the data aggregation completely independent from the calculation provided by the PP.

Out of 67 samples of ICS 24 were exclusive from usage survey and verification team could find only one stove was not in operation. Out of remaining 42 verified sample onsite by VT from the total population, there was not a single ICS found out of operation/not in use. Based on this, verification team can confirm, that CME/PPs value for this parameter (SOF) is higher (16% not in use, SOF 84%) than the verified value of (5.2% not in use i.e. SOF is 95.8%) and hence conservative.

Usage Survey Report^{/Ann-3/}, Usage survey analysis spread sheet^{/Ann-4/}, sample size selection spread sheet^{/Ann-9/} and sample size calculation spread sheet^{/ANN-8/} were assessed and found to be in line with the verified observation and Guideline for sampling and survey^{/G-SS/}.

b. Parameter F_{old}

According to the values above and the conservative estimation of 50% wrong values the maximum number of values to be checked for the population of ICS in the program (395) for parameter " F_{old} " (The fraction of end users that are still using baseline (replaced) stoves) would be as following:

$$n \geq \frac{1.96^2 \times 395 \times \frac{0.8 \times (1-0.8)}{0.8^2}}{(395-1) \times 0.1^2 + 1.96^2 \times \frac{0.8 \times (1-0.8)}{0.8^2}} = 77.41$$

Rounding up, the sample size for verification of weighing notes is 78.

During the on-site verification, almost 67 ICS were checked and users were interviewed if they are still using their baseline (3stone/mud stove using along with ICS). VT could not complete the desired 78 sample as calculated above in line with the guideline for sampling and survey due to inapproachability in the project area during site inspection because of land slides after heavy earthquake followed by regular precipitations in Nepal.

To further substantiate, as per the verification of 67 household ICS and interview with the end users 12 ICS were found to be used with baseline stoves, however, around 5 stoves were outside the kitchen and used for cattle food preparation and heating purposes during the winter period.

$$F_{old} = 12/67 \times 100$$

17.91% i.e. As per onsite observation and interview it was found that less than 20 % of households have been using their old stove along with ICS, which is less than CME/PP value of 80%, and hence the user survey conducted by the CME can be concluded as conservative.

Usage Survey Report^{/ANN-3/}, Usage survey analysis spread sheet^{/ANN-4/}, sample size selection spread sheet^{/ANN-9/} and sample size calculation spread sheet were assessed and found to be in line with the verified observation and Guideline for sampling and survey^{/G-SS/}.

As per the survey analysis spread sheet^{/ANN-4/}, Usage Survey Report^{/ANN-3/} and Monitoring report, it was verified that the overall mean proportion calculated for fold is 0.679. However, this value did not meet required confidence/precision level of 95/10 required for cross-CPA sampling. Thus the CME has opted the more conservative value of the upper bound of the confidence interval of 0.796 (80%). This approach is found to be in accordance with the applied methodology AMS II.G version 05 and hence acceptable.

c. Parameter $\eta_{new,y}$

According to the values above and the conservative estimation of 50% wrong values the maximum number of values to be checked for the population of ICS in the program for parameter $\eta_{new,y}$ (Efficiency of the device being deployed as part of the project activity in year y) would be as following:

The details calculation for sample size for this example is:

Sample size for mean value in simple random sampling as per CDM EB 75, Annex 8; Eq 67

$$n \geq \frac{1.96^2 NV}{(N-1) \times 0.1^2 + 1.96^2 V}$$

Where:

$$V = \left(\frac{SD}{mean} \right)^2$$

Variable		Value
n	Sample Size	9.2176
N	Population Size	34089
V	Variance	0.024
Mean (u)	Expected mean	28.06
SD	Expected SD	4.35
CI	Confidence Interval	1.96
P	Precision Level	10%

$$n \geq \frac{3.8416 * 34089 * 0.024}{34088 * 0.01 + 3.8416 * 0.024}$$

$$= 9.2176$$

Rounding, the sample size for verification of population of thermal efficiency test is 9.

During the on-site verification, verification team has inspected 67 samples out of which 5 were from exclusive WBT test samples for thermal efficiency test conducted by RETS, Nepal. WBT samples were limited in number (36) as compared to the usage survey (395) and hence sparsely distributed in the quite distant locations. As earlier mentioned, the host country of Nepal has experienced a very disastrous and heavy earthquake few weeks before the site visit was conducted. Although the damage in the project area (FWDR) was not as much as in the other part of the country, however heavy rainfall and landslides across the host country including FWDR region has caused difficulties and risk travelling to entire project area. Verification team has applied the technical sectoral expertise and tried contacting over phone to conduct a telephonic interview with the ICS users participated in the WBT. Unfortunately, none of the dialed phone number was responding due to lack of power to battery cell phone battery charge or network problem due to lack of electricity in those rural areas. Since, the parameter thermal efficiency of ICS in operation was tested in field using WBT by a third part government organization, and result of such cannot be verified by interviewing ICS users during site visit, verification team could decide the result produced by RETS as deemed appropriate. An expected mean of 28.06 was taken based on thermal efficiencies of different ICs model types (RS 1.1, RS 1.3 and RS 3.1). The same has been verified from the technical specification of ICS in the MR and supporting evidence^{/TECH/} and found satisfactory.

PP has selected 36 samples for WBT, which is in accordance with applied methodology AMS II.G version 05, which stipulates the minimum sample size of 30 for thermal efficiency test.

RETS is authorized and mandated to test the cook stove under Nepal Academy of Science and Technology (NAST) Act 2048 under its clause 31. RETS has been testing ICS from 2012 and recommended by Global Alliance for Clean Cook stoves (GACC).

WBT Report by RETS^{/ANN-6/} March 2015, WBT Data Analysis sheet^{/ANN-7/}, sample size selection spread sheet^{/ANN-9/} and sample size calculation spread sheet were assessed and found to be in line with the verified observation and Guideline for sampling and survey.

C.5. Clarification requests, corrective action requests and forward action requests raised

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
General			
Compliance of the monitoring report with the monitoring report form	-	2	-
Remaining forward action requests from validation and/or previous verification	-	-	-
Specific-case CPA(s) considered for verification and covered in this report	1	-	-
Programme of activities			
Compliance of the programme implementation with the registered PoA-DD	-	-	-
Implementation and operation of the management system	-	-	-
Post-registration changes			
<ul style="list-style-type: none"> Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline 	-	-	-
<ul style="list-style-type: none"> Corrections 	-	-	-
<ul style="list-style-type: none"> Inclusion of a monitoring plan in a registered PoA-DD (including its generic CPA-DD(s)) 	-	-	-

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
<ul style="list-style-type: none"> Permanent changes to the monitoring plan as described in the registered PoA-DD, applied methodology, or applied standardized baseline 	-	-	-
<ul style="list-style-type: none"> Changes to the programme design of the registered PoA-DD (including corresponding changes to project design of the generic CPA-DD(s)) and updates to the eligibility criteria for inclusion of specific-case CPAs in the PoA 	-	-	-
<ul style="list-style-type: none"> Types of changes specific to afforestation and reforestation activities 	-	-	-
Component project activity(ies)			
Compliance of the CPA implementation with the included CPA design document	-	-	-
Post-registration changes			
<ul style="list-style-type: none"> Temporary deviations from registered monitoring plan, applied methodology or applied standardized baseline 	-	-	-
<ul style="list-style-type: none"> Corrections 	-	-	-
<ul style="list-style-type: none"> Changes to the start date of the crediting period 	-	-	-
<ul style="list-style-type: none"> Inclusion of a monitoring plan to an included CPA-DD 	-	-	-
<ul style="list-style-type: none"> Permanent changes to the monitoring plan as described in the included CPA-DD, applied methodology, or applied standardized baseline 	-	-	-
<ul style="list-style-type: none"> Changes to the programme design of the included CPA-DD 	-	-	-
<ul style="list-style-type: none"> Types of changes specific to afforestation and reforestation component project activities 	-	-	-
Compliance of the monitoring plan with the monitoring methodology including applicable tool and standardized baseline	-	-	-
Compliance of monitoring activities with the registered monitoring plan	-	-	-
<ul style="list-style-type: none"> Data and parameters fixed ex ante or at renewal of crediting period 	-	1	-
<ul style="list-style-type: none"> Data and parameters monitored 	-	3	-
<ul style="list-style-type: none"> Implementation of sampling plan 	-	-	-
Compliance with the calibration frequency requirements for measuring instruments	-	-	-
Assessment of data and calculation of emission reductions or net removals			
<ul style="list-style-type: none"> Calculation of baseline GHG emissions or baseline net GHG removals by sinks 	-	-	-
<ul style="list-style-type: none"> Calculation of project GHG emissions or actual net GHG removals by sinks 	-	2	-
<ul style="list-style-type: none"> Calculation of leakage GHG emissions 	-	-	-
<ul style="list-style-type: none"> Summary of calculation of GHG emission reductions or net GHG removals by sinks 	1	-	-
<ul style="list-style-type: none"> Comparison of actual GHG emission reductions or net GHG removals by sinks with estimates in included specific-case CPA 	-	-	-
<ul style="list-style-type: none"> Remarks on difference from estimated value in registered PDD 	-	-	-
Others (please specify)			
Total	2	8	10

SECTION D. Internal quality control

Before the submission of the final verification report a technical review of the whole verification procedure was carried out. Each member of the technical review team is a competent GHG auditor. At least one person of the technical review team is being appointed for the scope this project falls under. Thus the technical review team collectively has all knowledge and skills to conduct a technical review. The technical reviewers are not considered to be part of the verification team and thus not involved in the decision making process up to the technical review.

As a result of the technical review process the verification opinion and the topic specific assessments as prepared by the verification team leader may have been confirmed or revised. Furthermore reporting improvements might have been achieved.

After the successful technical review an overall (esp. procedural) assessment of the complete verification has been carried out by a senior assessor located in the accredited premises of TÜV NORD.

After this step the submission for requesting for issuance is conducted.

SECTION E. Verification opinion

SNV Netherlands Development Organisation (SNV), Nepal has commissioned the TÜV NORD JI/CDM Certification Program to carry out the 1st periodic verification of the CDM PoA:

“Improved Cook Stove Programme with Carbon Finance (ICF), Nepal”,

with regard to the relevant requirements for CDM Programme of Activities. The PoA reduces GHG emissions due to introduction of efficient and improved cook stoves in Far Western Districts Regions (FWDR) in Nepal. The PoA aims to significantly reduce fuel wood consumption of low-income Nepalese households by providing them with affordable improved cooking stoves (ICS) in replacement of their low-efficiency, unimproved traditional stoves. The ICS disseminated by the PoA are more efficient than existing traditional cookstoves, facilitating a reduction in the quantity of wood fuel that each household must consume to meet their cooking needs. This verification covers the period from 19/12/2013 to 01/04/2015 (including both days).

As a result of this verification, the verifier confirms that:

- all operations of the project are implemented and installed as planned and described in the validated project design document,
- the monitoring plan is in accordance with the applied approved CDM methodology, i.e., AMS-II.G, version 05.0,
- the installed equipment essential for measuring parameters required for calculating emission reductions are calibrated appropriately,
- the monitoring system is in place and functional. The project has generated GHG emission reductions,
- the GHG emission reductions are calculated without material misstatements in a conservative and appropriate manner.

TÜV NORD JI/CDM CP further confirms that the project has achieved emission reductions in the above mentioned reporting period as follows:

Emission reductions: 46,988 t CO_{2e}.

SECTION F. Certification statement

As a duly accredited DOE, TÜV NORD CERT confirms that the CDM PoA

“Improved Cook Stove Programme with Carbon Finance (ICF), Nepal”

registered under

UNFCCC-No. : POA 9811

has achieved emission reductions in accordance with all applicable requirements for registered CDM project activities during the current monitoring period

MP-No.: 01

from: 19/12/2013

to: 01/04/2015

(including both days) as follows:

Emission reductions: 46,988 t CO_{2e}.

SECTION G. Verification findings - General**G.1. Compliance of the monitoring report with the monitoring report form**

Means of verification	<p>The project participant submitted a draft monitoring report to the verification team. The DOE has made this report publicly available prior to the start of the verification activities. No comments were received.</p> <p>By means of the UNFCCC website it has been checked whether the latest applicable MR template CDM-PoA-MR-FORM has been used.</p> <p>Further it has been checked whether the latest instructions for filling out the MR template have been followed. Every section has been checked against the respective guidance.</p> <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> • /MR/ • /MRT/ • /unfccc/ 	
Findings	<input checked="" type="checkbox"/>	The latest reporting template CDM-PoA-MR-FORM as listed on the UNFCCC website has been used for the Monitoring Report to be uploaded.
	<input type="checkbox"/>	The latest instructions for filling out the MR have been followed. No adverse finding has been identified in the course of this verification.
	<input checked="" type="checkbox"/>	The respective requirements have widely been complied with; however; the following issues needed to be addressed in this context: CAR F1 and CAR H1
Conclusion	<input type="checkbox"/>	No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.
	<input checked="" type="checkbox"/>	The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.

G.2. Remaining forward action requests from validation and/or previous verification

During the validation the validating DOE might have raised issues that could not be closed or resolved during the validation stage. For this purpose FARs might have been raised.

In the course of this verification the latest version of the PDD ^{/PDD/} and the validation report ^{/VAL/}, has been checked in order to identify any remaining forward action requests. For the current monitoring period the following applies:

(i) Open issues from validation:

<input checked="" type="checkbox"/>	There were no open issues which have been addressed in the latest version of the validation report.
<input type="checkbox"/>	All open issues from the validation have been appropriately addressed in the context of previous verifications.
<input type="checkbox"/>	All issues related to the validation have been appropriately addressed in the course of the current monitoring period (for details please refer to appendix 4)
<input type="checkbox"/>	The following issues related to the validation have not yet been appropriately addressed (for details please refer to appendix 4):
	- N/A

(ii) Open issues from previous verifications:

<input checked="" type="checkbox"/>	N/A – as this is the first monitoring period for this CDM project activity.
<input type="checkbox"/>	There were no open issues which have been addressed in the previous verification report
<input type="checkbox"/>	All issues related to the previous verification have been appropriately addressed in the course of the current monitoring period (for details please refer to appendix 4)

<input type="checkbox"/>	The following issues related to the previous verification have not yet been appropriately addressed (for details please refer to appendix 4):
	- N/A

G.3. Specific-case CPA(s) considered for verification and covered in this report

Reference number of the specific-case CPA included in the PoA as of the end of this monitoring period	Is the specific-case CPA considered for this verification? (yes/no)	Version number of the registered PoA-DD to which the specific-case CPA complies with	Confirmation that a request for issuance including the specific-case CPA has been published for the previous monitoring period (Y/N)
9811-0001	Yes	06	N
9811-0002	Yes	06	N

SECTION H. Verification findings – Programme of activities

H.1. Compliance of the programme implementation with the registered programme design document

Means of verification	<p>By means of an in-depth review of the PoA-DD/^{PoA-DD} in its latest form – as downloaded from the UNFCCC project site - and the checks carried out during the on-site visits, an assessment has been carried out whether the project has been implemented and operated in line with the latest approved version of the PoA-DD and whether all physical features of the project are in place. The following has been checked: implemented technology, project equipment as well as monitoring and metering equipment.</p> <p>Further it is has been checked if relevant technical equipment of the project activity has been exchanged or modified during the monitoring period in PoA-DD, MR and calculation spreadsheet are applied.</p> <p>Interviews with operational personnel have been carried out, management system records; maintenance records, survey and related monitoring procedures were checked in this context.</p> <p>Special focus has further been laid to determine whether a potential phase wise implementation has occurred within the crediting period or any delays with respect to the starting dates have occurred.</p> <p>Further it has been checked whether any observed deviations from the registered project design have been correctly addressed as PRCs.</p> <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> • /PDD/ • /MR/ • /VVS/ • /XLS/ • /QMS/ • /unfccc/ 	
Findings	<input checked="" type="checkbox"/>	The project has been implemented as described in the latest version of the PoA-DD as well as in section B.1 of the monitoring report. No deviations thereof have been identified in the course of this verification.
	<input type="checkbox"/>	The following deviations from the registered / approved project design and or the project description in the MR have been identified in the course of this verification (for further details please refer to section E.4): - N/A
	<input type="checkbox"/>	In this context the following CARs, CLs have been raised:
		<i>In case of phased implementation:</i>
	<input checked="" type="checkbox"/>	N/A

	<input type="checkbox"/>	The phased implementation has correctly and in sufficient detail been described in the latest version of the PoA-DD.
	<input type="checkbox"/>	The description in section 3.1 of the MR differs in content or the level of detail from the latest version of the PoA-DD. However, the description in the MR is correct and reflects the situation during the site inspection.
	<input type="checkbox"/>	The project description in the PoA-DD/MR is not deemed sufficient. The detailed implementation timeline is as follows: N/A
Conclusion	<input checked="" type="checkbox"/>	No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.
	<input type="checkbox"/>	The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.

H.2. Implementation and operation of the management system

Means of verification	<p>By means of review of the final PoA DD, validation report followed by an onsite inspection and interview with the CME, CPA implementer including involved personnel involved in the PoA, verification team observed that, the operation of the management system of the PoA is carried out as per the registered PoA design.</p> <p>It has been further checked by means of interview with the local partners of the PoA , CME and CPA implementer on their training and competency to carry out the operation of the management system, and found it satisfactory.</p> <p>Several training records^{/TRNG/} submitted by CME including training on record keeping, data entry, data management, data protection, awareness etc. have also been checked during the course of verification process. A clear operation and management structure have been observed during the onsite visit and interview.</p> <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> • PoA DD • VAL • MR • VVS • XLS • IM • TRNG (ANN-3, ANN-16, ANN-17)
Findings	No CARs/CLs have been raised in this context. No correction was required in the context.
Conclusion	The project is in line with the respective requirements.

H.3. Post-registration changes

☒ By means of site visit, document check and interview it could be verified that the project is implemented and operated in line with the registered PoA-DD and the applied methodology.

☒ Post registration changes have been identified and are assessed in detail in the subsequent steps.

H.3.1. Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline

It has been checked whether Temporary deviations from the registered monitoring plan (TDfrMP) or Temporary deviations from monitoring methodology or standardized baseline (TDfMM) have been applied during this monitoring period. The result is summarized in the table below.

<input checked="" type="checkbox"/>	No Temporary deviations from the registered monitoring plan (TDfrMP) or Temporary deviations from monitoring methodology or standardized baseline (TDfMM) have been submitted to the UNFCCC prior to the current monitoring period.		
<input type="checkbox"/>	The following TDfrMP or TDfMM have been approved or are under approval by the UNFCCC		
	1	Title	
		Status	<input type="checkbox"/> under approval; <input type="checkbox"/> approved (approval No.:)
		Appr.date	
		Ref. No.	
	2	Title	
		Status	<input type="checkbox"/> under approval; <input type="checkbox"/> approved (approval No.:)
		Appr.date	
		Ref.No.	
<input checked="" type="checkbox"/>	During the verification of the current MP no need for a TDfrMP or TDfMM has been identified. The monitoring plan is in accordance with the approved methodology applied by the PA		
<input type="checkbox"/>	An approval of the following TDfrMP or TDfMM is to be requested from the EB for the current MP as appendix 1 of the project standard does not apply. Please refer to the related PRC report submitted along with this issuance request for further details w.r.t. the assessment of the PRC.		
	1	Issue:	
	2	Issue:	
<input type="checkbox"/>	The following TDfrMP or TDfMM for which appendix 1 of the PS is applicable have been applied:		
	1	Issue:	
	2	Issue:	

H.3.2. Corrections

It has been checked whether any corrections to project information or parameters fixed at validation have been approved during this monitoring period or submitted with this monitoring report. The result is summarized in the table below.

<input checked="" type="checkbox"/>	During the verification of the current MP no need for corrections has been identified.
<input type="checkbox"/>	The following corrections have been applied:

1	Issue:	
2	Issue:	
The CPA-DD has been revised accordingly: Revision date:		
It is confirmed that the updated / corrected information is an accurate reflection of the actual project information and that the corrected parameters are in accordance with the applied methodology and the monitoring plan.		
<input type="checkbox"/> A related post registration change has been submitted prior to the issuance request. The approval has been received on DD/MM/YYYY via approval number PRC-XXXX-00Z. <input type="checkbox"/> A related post registration change is submitted along with this issuance request. Please refer to the related PRC report submitted along with this issuance request for further details w.r.t. the assessment of the PRC.		

H.3.3. Inclusion of a monitoring plan in a registered PoA-DD (including its generic CPA-DD(s))

<input checked="" type="checkbox"/>	N/A - as this monitoring plan was part of the registered PoA-DD /CPA-DD
<input type="checkbox"/>	In line with PS § 281 or § 282 the PP has forwarded a monitoring plan to the DOE for validation. No prior approval of the monitoring plan was required as the PP in line with PS § 282 wished to submit the monitoring plan together with the request for issuance for the first monitoring period. Please refer to the related PRC report submitted along with this issuance request for further details w.r.t. the assessment of the PRC..
<input type="checkbox"/>	In line with § 282 the PP submitted a monitoring plan prior to the submission of the request for issuance for validation to the DOE. A DOE has assessed the monitoring plan in line with related VVS requirements and submitted a related PRC report for prior approval. The approval has been received on DD/MM/YYYY via approval number

H.3.4. Permanent changes to the monitoring plan as described in the registered PoA-DD, applied methodology, or applied standardized baseline

It has been checked whether any permanent changes from the registered monitoring plan (PCfrMP) or applied methodologies (PCfMM) including standardized baselines (PCfSB) have been approved prior or during this monitoring period or submitted with this monitoring report. The result is summarized in the table below.

<input checked="" type="checkbox"/>	No PCfrMP, PCfMM or PCfSB have been submitted to the UNFCCC prior to the current monitoring period		
<input type="checkbox"/>	The following PCfrMP, PCfMM or PCfSB have been approved or are under approval by the UNFCCC		
	1	Title	
		Status	<input type="checkbox"/> under approval; <input type="checkbox"/> approved
		Appr.date	
		Ref. No.	
	2	Title	
		Status	<input type="checkbox"/> under approval; <input type="checkbox"/> approved

	Appr.date	
	Ref.No.	
<input checked="" type="checkbox"/>	During the verification of the current MP no need for a PCfrMP, PCfMM or PCfSB has been identified. The monitoring plan is in accordance with the approved methodology applied by the PA	
<input type="checkbox"/>	An approval of the following PCfrMP, PCfMM or PCfSB is to be requested from the EB for the current MP as appendix 1 of the project standard does not apply.	
1	Issue:	
2	Issue:	
<input type="checkbox"/>	The following PCfrMP, PCfMM or PCfSB for which appendix 1 of the PS is applicable have been applied:	
1	Issue:	
2	Issue:	

H.3.5. Changes to the programme design of the registered PoA-DD (including corresponding changes to project design of the generic CPA-DD(s)) and updates to the eligibility criteria for inclusion of specific-case CPAs in the PoA

It has been checked whether any changes to the project design (CoPD) have been approved prior or during this monitoring period or submitted with this monitoring report. The result is summarized in the table below.

<input checked="" type="checkbox"/>	No CoPD has been submitted to the UNFCCC prior to the current monitoring period	
<input type="checkbox"/>	The following CoPD have been approved or are under approval by the UNFCCC	
1	Title	
	Status	<input type="checkbox"/> under approval; <input type="checkbox"/> approved
	Appr.date	
	Ref. No.	
2	Title	
	Status	<input type="checkbox"/> under approval; <input type="checkbox"/> approved
	Appr.date	
	Ref.No.	
<input checked="" type="checkbox"/>	During the verification of the current MP no need for a CoPD has been identified. The monitoring plan is in accordance with the approved methodology applied by the PA	
<input type="checkbox"/>	An approval of the following CoPD.is to be requested from the EB for the current MP as appendix 1 of the project standard does not apply.	
1	Issue:	
2	Issue:	
<input type="checkbox"/>	The following CoPD for which appendix 1 of the PS is applicable have been applied:	
1	Issue:	
2	Issue:	

H.3.6. Types of changes specific to afforestation and reforestation activities

<input checked="" type="checkbox"/>	N/A - as this monitoring plan was part of the registered PDD
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SECTION I. Verification findings – Component project activity(ies)**I.1. Compliance of the CPA implementation with the included CPA design document**

Means verification of	CPA#01 and CPA#02 are involved in disseminating ICS of the efficiency more than specified efficiency of 20% in the FWDR region of Nepal in order to reduce the firewood consumption by the use of conventional baseline stoves. All monitoring parameters are assessed to be monitored as per the registered monitoring plan in included CPA-DDs and registered PoA-DD.
Findings	No finding is raised in this regard.
Conclusion	CPAs (CPA#01 and CPA#02) under verification is implemented as described in the included CPA#01 and CPA#02 design document and registered PoA-DD as verified from the CPA-DDs and registered PoA-DD downloaded from the project webpage of unfccc website and onsite observation by the verification team. It is also found to be implemented inline with the applied methodology AMS II.G version 05.

I.2. Post-registration changes

- ☒ By means of site visit, document check and interview it could be verified that the project is implemented and operated in line with the registered CPA-DDs and the applied methodology.
- ☐ Post registration changes have been identified and are assessed in detail in the subsequent steps.

I.2.1. Temporary deviations from registered monitoring plan, applied methodology or applied standardized baseline

It has been checked whether Temporary deviations from the registered monitoring plan (TDfrMP) or Temporary deviations from monitoring methodology or standardized baseline (TDfMM) have been applied during this monitoring period. The result is summarized in the table below.

<input checked="" type="checkbox"/>	No Temporary deviations from the registered monitoring plan (TDfrMP) or Temporary deviations from monitoring methodology or standardized baseline (TDfMM).have been submitted to the UNFCCC prior to the current monitoring period.		
<input type="checkbox"/>	The following TDfrMP or TDfMM have been approved or are under approval by the UNFCCC		
	1	Title	
		Status	<input type="checkbox"/> under approval; <input type="checkbox"/> approved (approval No.:)
		Appr.date	
		Ref. No.	
	2	Title	
		Status	<input type="checkbox"/> under approval; <input type="checkbox"/> approved (approval No.:)
		Appr.date	
		Ref.No.	
<input checked="" type="checkbox"/>	During the verification of the current MP no need for a TDfrMP or TDfMM has been identified.		

	The monitoring plan is in accordance with the approved methodology applied by the PA	
<input type="checkbox"/>	An approval of the following TDfrMP or TDfMM is to be requested from the EB for the current MP as appendix 1 of the project standard does not apply. Please refer to the related PRC report submitted along with this issuance request for further details w.r.t. the assessment of the PRC.	
	1	Issue: <input type="text"/>
	2	Issue: <input type="text"/>
<input type="checkbox"/>	The following TDfrMP or TDfMM for which appendix 1 of the PS is applicable have been applied:	
	1	Issue: <input type="text"/>
	2	Issue: <input type="text"/>

I.2.2. Corrections

It has been checked whether any corrections to project information or parameters fixed at validation have been approved during this monitoring period or submitted with this monitoring report. The result is summarized in the table below.

<input type="checkbox"/>	During the verification of the current MP no need for corrections has been identified.	
<input checked="" type="checkbox"/>	The following corrections have been applied:	
	1	Issue: In CPA # 01, the CPA-DD states two specific stove models that shall be included: RS1.1 and RS3.1. PRC1 proposes a correction to the language in this document to specify that RS1.1 and RS3.1 are examples of stove models that shall be included in the CPA, but that new models of the ICS may be included provided they meet the requirements listed in the PoA.
	2	Issue: The purpose of PRC2 is to add the start date of 23/05/2013, the date of installation of the first ICS included in the CPA.
	The CPA-DD has been revised accordingly: (New) version No.: 07 Revision date: 23/08/2015	
	It is confirmed that the updated / corrected information is an accurate reflection of the actual project information and that the corrections are in accordance with the registered PoA-DD, applied methodology and the monitoring plan.	
	<input type="checkbox"/> A related post registration change has been submitted prior to the issuance request. The approval has been received on DD/MM/YYYY via approval number PRC-XXXX-00Z. <input checked="" type="checkbox"/> A related post registration change is submitted along with this issuance request. Please refer to the related PRC report submitted along with this issuance request for further details w.r.t. the assessment of the PRC.	

I.2.3. Changes to the start date of the crediting period

NA

I.2.4. Inclusion of a monitoring plan to an included CPA-DD

<input checked="" type="checkbox"/>	N/A - as this monitoring plan was part of the included CPA-DD
-------------------------------------	---

<input type="checkbox"/>	In line with PS § 281 or § 282 the PP has forwarded a monitoring plan to the DOE for validation. No prior approval of the monitoring plan was required as the PP in line with PS § 282 wished to submit the monitoring plan together with the request for issuance for the first monitoring period. Please refer to the related PRC report submitted along with this issuance request for further details w.r.t. the assessment of the PRC.
<input type="checkbox"/>	In line with § 282 the PP submitted a monitoring plan prior to the submission of the request for issuance for validation to the DOE. A DOE has assessed the monitoring plan in line with related VVS requirements and submitted a related PRC report for prior approval. The approval has been received on DD/MM/YYYY via approval number

I.2.5. Permanent changes to the monitoring plan as described in the included CPA-DD, applied methodology, or applied standardized baseline

It has been checked whether any permanent changes from the registered monitoring plan (PCfrMP) or applied methodologies (PCfMM) including standardized baselines (PCfSB) have been approved prior or during this monitoring period or submitted with this monitoring report. The result is summarized in the table below.

<input checked="" type="checkbox"/>	No PCfrMP, PCfMM or PCfSB have been submitted to the UNFCCC prior to the current monitoring period									
<input type="checkbox"/>	The following PCfrMP, PCfMM or PCfSB have been approved or are under approval by the UNFCCC									
	1	<table border="1"> <tr> <td>Title</td> <td></td> </tr> <tr> <td>Status</td> <td><input type="checkbox"/> under approval; <input type="checkbox"/> approved</td> </tr> <tr> <td>Appr.date</td> <td></td> </tr> <tr> <td>Ref. No.</td> <td></td> </tr> </table>	Title		Status	<input type="checkbox"/> under approval; <input type="checkbox"/> approved	Appr.date		Ref. No.	
Title										
Status	<input type="checkbox"/> under approval; <input type="checkbox"/> approved									
Appr.date										
Ref. No.										
	2	<table border="1"> <tr> <td>Title</td> <td></td> </tr> <tr> <td>Status</td> <td><input type="checkbox"/> under approval; <input type="checkbox"/> approved</td> </tr> <tr> <td>Appr.date</td> <td></td> </tr> <tr> <td>Ref.No.</td> <td></td> </tr> </table>	Title		Status	<input type="checkbox"/> under approval; <input type="checkbox"/> approved	Appr.date		Ref.No.	
Title										
Status	<input type="checkbox"/> under approval; <input type="checkbox"/> approved									
Appr.date										
Ref.No.										
<input checked="" type="checkbox"/>	During the verification of the current MP no need for a PCfrMP, PCfMM or PCfSB has been identified. The monitoring plan is in accordance with the approved methodology applied by the PA									
<input type="checkbox"/>	An approval of the following PCfrMP, PCfMM or PCfSB is to be requested from the EB for the current MP as appendix 1 of the project standard does not apply.									
	1	Issue: <table border="1"><tr><td></td></tr></table>								
	2	Issue: <table border="1"><tr><td></td></tr></table>								
<input type="checkbox"/>	The following PCfrMP, PCfMM or PCfSB for which appendix 1 of the PS is applicable have been applied:									
	1	Issue: <table border="1"><tr><td></td></tr></table>								
	2	Issue: <table border="1"><tr><td></td></tr></table>								

I.2.6. Changes to the programme design of the included CPA-DD

It has been checked whether any changes to the project design (CoPD) have been approved prior or during this monitoring period or submitted with this monitoring report. The result is summarized in the table below.

<input checked="" type="checkbox"/>	No CoPD has been submitted to the UNFCCC prior to the current monitoring period		
<input type="checkbox"/>	The following CoPD have been approved or are under approval by the UNFCCC		
	1	Title	
		Status	<input type="checkbox"/> under approval; <input type="checkbox"/> approved
		Appr.date	
		Ref. No.	
	2	Title	
		Status	<input type="checkbox"/> under approval; <input type="checkbox"/> approved
		Appr.date	
		Ref.No.	
<input checked="" type="checkbox"/>	During the verification of the current MP no need for a CoPD has been identified. The monitoring plan is in accordance with the approved methodology applied by the PA		
<input type="checkbox"/>	An approval of the following CoPD is to be requested from the EB for the current MP as appendix 1 of the project standard does not apply.		
	1	Issue:	
	2	Issue:	
<input type="checkbox"/>	The following CoPD for which appendix 1 of the PS is applicable have been applied:		
	1	Issue:	
	2	Issue:	

I.2.7. Types of changes specific to afforestation and reforestation component project activities

<input checked="" type="checkbox"/>	N/A - as this monitoring plan was part of the registered PoA-DD
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I.3. Compliance of monitoring plan with the monitoring methodology including applicable tool and standardized baseline

Means of verification	By means of comparison of the MR with (i) the applied CDM methodology (ii) all applicable CDM Meth tools and (iii) if applicable, a standardized baseline the verification team has checked whether the MP is in compliance with the MP related requirements of the applied methodology/tools/SB. The following sources of information have been used in this context: <ul style="list-style-type: none"> • /MR/ • /AMS II.G./ • /unfccc/ 		
Findings	<input checked="" type="checkbox"/>	The MP is completely in accordance with the approved methodology applied by the CDM PoA project (last registered/approved version of the PoA-DD)	
	<input checked="" type="checkbox"/>	The breakdown of MP accordance of the referenced guidelines is as follows:	
		1	Title (of the guideline) <ul style="list-style-type: none"> • General guidelines for SSC CDM methodologies", "Guidelines on the demonstration of additionality of

			small-scale project activities”	
			<ul style="list-style-type: none"> General guidance on leakage in biomass project activities 	
		MP compliance	<input checked="" type="checkbox"/> full compliance <input type="checkbox"/> findings have been raised <input type="checkbox"/> N/A (for MP)	
	2	Title (of the tool)	[Name_SB]	
		Version	[Version_SB]	
		MP compliance	<input type="checkbox"/> full compliance <input type="checkbox"/> findings have been raised <input checked="" type="checkbox"/> N/A	
		The breakdown of MP accordance of the applicable SB is as follows:		
	<input type="checkbox"/>	1	Title (of the SB)	Name of SB
			Version	
			MP compliance	
	<input type="checkbox"/>	In this context the following CARs, CLs, FARs have been raised:		
		-		
Conclusion	<input type="checkbox"/>	No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements.		
	<input type="checkbox"/>	The raised CARs/CLs/FARs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.		

I.4. Compliance of monitoring activities with the registered monitoring plan

I.4.1. Data and parameters fixed ex ante or at renewal of crediting period

Means of verification		By means of comparison of the MR and the ER calculation with the latest version of the registered PoA-DD the verification team has checked whether all parameters fixed ex-ante have been applied correctly. Further it has been checked whether the GWP for the respective period have been correctly applied. The following sources of information have been used in this context: <ul style="list-style-type: none"> /MR/ /XLS/ /PoA-DD/ /PS/ /VVS/ /unfccc/
Findings	<input checked="" type="checkbox"/>	The MR and the ER calculation have considered the parameters fixed ex-ante correctly, no deviations have been observed.
	<input type="checkbox"/>	The following deviations from the parameters fixed ex-ante or at renewal of crediting period have been identified in the course of this verification: - N/A
	<input checked="" type="checkbox"/>	In this context the following CARs, CLs, FARs have been raised: CAR G1
Conclusion	<input type="checkbox"/>	No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements.
	<input checked="" type="checkbox"/>	The raised CARs/CLs/FARs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.

I.4.2. Data and parameters monitored

Means of verification	<p>During the verification all relevant monitoring parameters (as listed in chapter B.7.1 of the PoA-DD and D.7.1 of the CPA-DD) have been verified with regard to the</p> <ul style="list-style-type: none"> (i) appropriateness of the applied measurement / determination method, (ii) the correctness of the values applied for ER calculation, (iii) the accuracy, and applied QA/QC measures. <p>The results as well as the verification procedure are described parameter-wise in the project specific verification checklist (Appendix 5).</p>	
Findings	For details please refer to appendix 5	
Conclusion	<input type="checkbox"/>	No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements.
	<input checked="" type="checkbox"/>	The raised CARs/CLs/FARs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.
	It can be confirmed that all monitoring parameters have been measured / determined without material misstatements and in line with all applicable standards and relevant requirements.	

I.4.3. Implementation of sampling plan

Means of verification	<p>The verification team has been checked whether the PPs have applied a sampling approach to determine the monitored values. Further it has been checked whether the PPs have correctly applied the implemented sampling plan including</p> <ul style="list-style-type: none"> (i) description of the implemented sampling design (ii) collected data (iii) analysis of collected data (iv) demonstration on whether the required confidence/precision has been met. <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> • /MR/ • /XLS/ • /PoA-DD/ • Usage Survey report • Usage Survey Analysis sheet • WBT report • Sample size calculation sheet • Standard and Guideline for sampling and survey • /CPA-DD/. 		
Findings	<input type="checkbox"/>	The PPs have not applied sampling approaches for the parameters monitored.	
	<input checked="" type="checkbox"/>	The PPs have applied sampling approaches for the following parameters monitored.	
		1	Parameter: SOF
			Name: Stove Operation Fraction – used to determine the share of distributed stoves that are still operating, measured ex-post through survey/ user feedback
			Description on how the sampling efforts and survey comply with the validated sampling plan: Determined through Usage Survey; employed multi-stage sampling method with VDC as primary sampling unit and ICS as secondary sampling unit. Samples exceeded calculated minimum sample size for 95/10 confidence/precision.
		2	Parameter: f_{old}
			Name: The fraction of end users that are still using baseline (replaced) stoves.

		Description on how the sampling efforts and survey comply with the validated sampling plan:	Determined through Usage Survey; employed multi-stage sampling method with VDC as primary sampling unit and ICS as secondary sampling unit. Samples exceeded calculated minimum sample size for 95/10 confidence/precision.
		Parameter:	$\eta_{new,y}$
		Name:	Efficiency of the device being deployed as part of the project activity in year y
		Description on how the sampling efforts and survey comply with the validated sampling plan:	Determined through WBTs; employed multi-stage stratified sampling method, with VDC as primary sampling unit and ICS as secondary sampling unit, stratified at secondary sampling unit by ICS type. Samples taken met calculated minimum sample size for 95/10 confidence/precision.
	<input checked="" type="checkbox"/>	In this context the following CARs, CLs, FARs have been raised: CAR G4 and CAR G5:	
Conclusion	<input type="checkbox"/>	No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements.	
	<input checked="" type="checkbox"/>	The raised CARs/CLs/FARs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.	

I.5. Compliance with the calibration frequency requirements for measuring instruments

Means of verification	<p>This PoA is basically the distribution of improved cook stoves in the FWDR region in Nepal, where the majority of households were using 3 stone traditional woodstoves. Measurements required for monitoring does not directly require equipment and its calibration in the PP's hand. For stove efficiency test (WBT), a third party Government body is allowed to test the thermal efficiency of deployed cook stove applying Water Boiling Test. The same is checked and reviewed during the verification.</p> <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> • /MR/ • /XLS/ • /PoA-DD/ • /AMS. II.G/ 	
Findings	<input checked="" type="checkbox"/>	Based on the details listed in appendix 6 the verification team can confirm that all installed monitoring equipment has been duly calibrated for this entire monitoring period.
	<input type="checkbox"/>	<p>Based on the assessment and information as per appendix 6 delay(s) in calibration have been identified. The PP has applied the maximum permissible error of the instrument to the measured values taken during the period between the scheduled date of calibration and the actual date of calibration.</p> <p>From the related calibration certificates and emission reduction calculation the verification team confirms that the maximum permissible error has been applied in a conservative manner so that the adjusted measured values due to the delayed calibration result in fewer claimed emission reductions.</p> <p>For details please refer to appendix 6</p>
	<input type="checkbox"/>	In this context the following CARs, CLs, FARs have been raised:
Conclusion	<input checked="" type="checkbox"/>	No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements.

	<input type="checkbox"/>	The raised CARs/CLs/FARs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.

I.6. Assessment of data and calculation of emission reductions or net removals

I.6.1. Calculation of baseline GHG emissions or baseline net GHG removals by sinks

Means of verification		<p>During the verification the calculation of baseline GHG emissions has been checked. In detail the following has been verified:</p> <ul style="list-style-type: none"> • Transparency: It has been checked whether the calculation of baseline emissions is fully traceable and, where used, the Excel calculation provides all calculation formulae. • Parameter consistency: It has been checked whether all internal and external parameters and data used for the calculation are applied consistently in the monitoring report and the calculation spread sheet. • Correctness: It has been checked whether the applied formulae and methods for calculating baseline emissions are in accordance with the monitoring plan and the approved methodology. • Completeness: It has been checked whether all calculations are complete and without omissions. <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> • /MR/ • /ANN-3//USAGE/ • /ANN-4//WBT/ • /ANN-6/ • /XLS/
Findings	<input checked="" type="checkbox"/>	<p>The calculation of the baseline emissions was found to be fully compliant with the above stated principles.</p> <p>The calculations of baseline GHG emissions or baseline net GHG removals have been carried out in accordance with the formulae and methods described in the registered monitoring plan, the applied methodology and, where applicable, the applied standardized baseline. Any assumptions used in emission or removal calculations have been justified. Appropriate emission factors, IPCC default values, GWPs and other reference values have been correctly applied.</p> <p>No errors, miscalculations, omissions, misstatements or incomplete information has been identified.</p>
	<input type="checkbox"/>	<p>The verification team has identified mistakes in the baseline emissions calculation or the underlying calculation approaches.</p>
	<input checked="" type="checkbox"/>	<p>In this context the following CARs, CLs, FARs have been raised:</p> <p>In the section H of the monitoring report, all the value used for calculation of accrued emission reduction for CPA01 and CPA02 under the current monitoring period shall be provided with appropriate and accurate reference/sources. Also the reference to the electronic spread sheet is also not provided.</p> <p>Please refer CDM-PoA-MR-FORM version 01, PS § 248.</p>
Conclusion	<input checked="" type="checkbox"/>	<p>No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements.</p>
	<input type="checkbox"/>	<p>The raised CARs/CLs/FARs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.</p>
		<p>Where corrections were required a revised baseline emissions calculation was prepared by the PPs and presented to the verification team. All raised issues were addressed appropriately so that it can be confirmed that the baseline calculation is overall correct.</p>

I.6.2. Calculation of project GHG emissions or actual net GHG removals by sinks

Means of verification	<p>During the verification the calculation of project GHG emissions has been checked. In detail the following has been verified:</p> <ul style="list-style-type: none"> • Transparency: It has been checked whether the calculation of project emissions is fully traceable and, where used, the Excel calculation provides all calculation formulae. • Parameter consistency: It has been checked whether all internal and external parameters and data used for the calculation are applied consistently in the monitoring report and the calculation spread sheet. • Correctness: It has been checked whether the applied formulae and methods for calculating project emissions are in accordance with the monitoring plan and the approved methodology. • Completeness: It has been checked whether all calculations are complete and without omissions. <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> • /MR/ • /AMS II.G/ • /XLS/. 						
Findings	<table border="1"> <tr> <td data-bbox="467 763 531 1099"><input checked="" type="checkbox"/></td><td data-bbox="531 763 1412 1099"> <p>The calculation of the project emissions was found to be fully compliant with the above stated principles.</p> <p>The calculations of project GHG emissions or actual net GHG removals have been carried out in accordance with the formulae and methods described in the registered monitoring plan, the applied methodology and, where applicable, the applied standardized baseline. Any assumptions used in emission or removal calculations have been justified. Appropriate emission factors, IPCC default values, GWPs and other reference values have been correctly applied.</p> <p>No errors, miscalculations, omissions, misstatements or incomplete information have been identified.</p> </td></tr> <tr> <td data-bbox="467 1099 531 1167"><input type="checkbox"/></td><td data-bbox="531 1099 1412 1167"> <p>The verification team has identified mistakes in the project emissions calculation or the underlying calculation approaches.</p> </td></tr> <tr> <td data-bbox="467 1167 531 1234"><input type="checkbox"/></td><td data-bbox="531 1167 1412 1234"> <p>In this context the following CARs, CLs, FARs have been raised:</p> </td></tr> </table>	<input checked="" type="checkbox"/>	<p>The calculation of the project emissions was found to be fully compliant with the above stated principles.</p> <p>The calculations of project GHG emissions or actual net GHG removals have been carried out in accordance with the formulae and methods described in the registered monitoring plan, the applied methodology and, where applicable, the applied standardized baseline. Any assumptions used in emission or removal calculations have been justified. Appropriate emission factors, IPCC default values, GWPs and other reference values have been correctly applied.</p> <p>No errors, miscalculations, omissions, misstatements or incomplete information have been identified.</p>	<input type="checkbox"/>	<p>The verification team has identified mistakes in the project emissions calculation or the underlying calculation approaches.</p>	<input type="checkbox"/>	<p>In this context the following CARs, CLs, FARs have been raised:</p>
<input checked="" type="checkbox"/>	<p>The calculation of the project emissions was found to be fully compliant with the above stated principles.</p> <p>The calculations of project GHG emissions or actual net GHG removals have been carried out in accordance with the formulae and methods described in the registered monitoring plan, the applied methodology and, where applicable, the applied standardized baseline. Any assumptions used in emission or removal calculations have been justified. Appropriate emission factors, IPCC default values, GWPs and other reference values have been correctly applied.</p> <p>No errors, miscalculations, omissions, misstatements or incomplete information have been identified.</p>						
<input type="checkbox"/>	<p>The verification team has identified mistakes in the project emissions calculation or the underlying calculation approaches.</p>						
<input type="checkbox"/>	<p>In this context the following CARs, CLs, FARs have been raised:</p>						
Conclusion	<table border="1"> <tr> <td data-bbox="467 1234 531 1301"><input checked="" type="checkbox"/></td><td data-bbox="531 1234 1412 1301"> <p>No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements.</p> </td></tr> <tr> <td data-bbox="467 1301 531 1391"><input type="checkbox"/></td><td data-bbox="531 1301 1412 1391"> <p>The raised CARs/CLs/FARs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.</p> </td></tr> </table> <p>Where corrections were required a revised PE calculation was prepared by the PPs and presented to the verification team. All raised issues were addressed appropriately so that it can be confirmed that the baseline calculation is overall correct.</p>	<input checked="" type="checkbox"/>	<p>No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements.</p>	<input type="checkbox"/>	<p>The raised CARs/CLs/FARs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.</p>		
<input checked="" type="checkbox"/>	<p>No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements.</p>						
<input type="checkbox"/>	<p>The raised CARs/CLs/FARs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.</p>						

I.6.3. Calculation of leakage GHG emissions

Means of verification	<p>During the verification the calculation of project GHG emissions has been checked. In detail the following has been verified:</p> <ul style="list-style-type: none"> • Transparency: It has been checked whether the calculation of project emissions is fully traceable and, where used, the Excel calculation provides all calculation formulae. • Parameter consistency: It has been checked whether all internal and external parameters and data used for the calculation are applied consistently in the monitoring report and the calculation spreadsheet. • Correctness: It has been checked whether the applied formulae and methods for calculating project emissions are in accordance with the monitoring plan and the approved methodology. • Completeness: It has been checked whether all calculations are complete and without omissions. <p>As per the small scale methodology AMS-II. G version 05.0 paragraph 20 and</p>
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	<p>paragraph 29 (c), the net to gross adjustment factor of 0.95 has been applied to By to account for leakages, thus leakage emissions were already taken into account in the estimation of overall emission reductions</p> <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> • /MR/ • /AMS II.G/ • /XLS/.
Findings	<input checked="" type="checkbox"/> <p>The calculation of the project emissions was found to be fully compliant with the above stated principles.</p> <p>The calculations of project GHG emissions or actual net GHG removals have been carried out in accordance with the formulae and methods described in the registered monitoring plan, the applied methodology and, where applicable, the applied standardized baseline. Any assumptions used in emission or removal calculations have been justified. Appropriate emission factors, IPCC default values, GWPs and other reference values have been correctly applied.</p> <p>No errors, miscalculations, omissions, misstatements or incomplete information have been identified.</p>
	<input type="checkbox"/> <p>The verification team has identified mistakes in the project emissions calculation or the underlying calculation approaches.</p>
	<input type="checkbox"/> <p>In this context the following CARs, CLs, FARs have been raised:</p>
Conclusion	<input checked="" type="checkbox"/> <p>No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements.</p>
	<input type="checkbox"/> <p>The raised CARs/CLs/FARs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.</p>
	<p>Where corrections were required a revised PE calculation was prepared by the PPs and presented to the verification team. All raised issues were addressed appropriately so that it can be confirmed that the baseline calculation is overall correct.</p>

I.6.4. Summary of calculation of GHG emission reductions or net GHG removals by sinks

Means of verification	<p>The verification team has checked if the MR includes a summary table of the emission reductions calculation specifying separately</p> <ul style="list-style-type: none"> • Total baseline emissions, • Total project emissions, • Total leakage, • Total emission reductions. <p>It has been assessed whether the values are correct or need to be revised as a consequence of issues identified above.</p>
Findings	<input checked="" type="checkbox"/> <p>Section H.4 of the MR includes in a summary table of the emission reductions calculation.</p>
	<input checked="" type="checkbox"/> <p>The summary table specified the total baseline, project and leakage emissions as well as the total emission reductions separately.</p>
	<input checked="" type="checkbox"/> <p>The values as specified in the ER summary table are correct; no issues have been identified during the verification which requires changes in the ER calculation.</p>
	<input type="checkbox"/> <p>During the verification issues with impact on the ER calculation have been identified.</p>
	<input type="checkbox"/> <p>In this context the following CARs, CLs, FARs have been raised:</p>
Conclusion	<input checked="" type="checkbox"/> <p>No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements.</p>
	<input type="checkbox"/> <p>The raised CARs/CLs/FARs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.</p>

Specific-case CPA reference number	Baseline emissions or baseline net GHG removals by sinks (tCO ₂ e)	Project emissions or actual net GHG removals by sinks (tCO ₂ e)	Leakage (tCO ₂ e)	GHG emission reductions or net GHG removals by sinks (tCO ₂ e)		
				Results achieved in the period up to 31 December 2012	Results achieved in the period from 1 January 2013 onwards	Results achieved in the entire monitoring period
9811-0001	40,543		NA	0	387 (2013) 30,757(2014) 9,400 (2015)	40,543
9811-0002	6,445		NA	0	608 (2014) 5,837 (2015)	6,445
Total	46,988					46,988

I.6.5. Comparison of actual GHG emission reductions or net GHG removals by sinks with estimates in included specific-case CPA

Means of verification	The verification team has checked if the MR includes a comparison of actual values of the monitoring period with the estimations in the registered PoA-DD. It has further checked which of the below listed cases is applicable for the calculated ER of the current monitoring period.	
Findings	<input checked="" type="checkbox"/>	Case 1: The ex-ante estimated value was found to be proportionally higher than the ex-post determined value. No further action is deemed required.
	<input type="checkbox"/>	Case 2: The ex-ante estimated value fits very good to the actually monitored value. No further justification is deemed required.
	<input type="checkbox"/>	Case 3: The ex-ante estimated value was found to be proportionally lower than the ex-post determined value.
	<input type="checkbox"/>	In this context the following CARs, CLs, FARs have been raised:
Conclusion	<input checked="" type="checkbox"/>	No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements.
	<input type="checkbox"/>	The raised CARs/CLs/FARs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.

Specific-case CPA reference number	Value estimated in ex ante calculation in the included specific-case CPA-DD(s)	Actual values achieved by the specific-case CPA(s) during this monitoring period
9811-0001	53,436	40,543
9811-0002	11,849	6,445
Total	65,286	46,988

I.6.6. Remarks on difference from estimated value in registered PDD

Means of verification	On the basis of the above comparison of actual values of the monitoring period with the estimations in the registered PoA-DD (E.8.5) the verification team has checked whether (in case 3) an appropriate explanation is included in the MR.
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Findings	<input checked="" type="checkbox"/>	No further justification or explanation is deemed required as actual emissions of this MP do not exceed significantly the ex-ante calculated emission reductions (applicable for case 1 and 2).
	<input type="checkbox"/>	For case 3: The PP has provided a related justification in the MR. The reasons for the increase are as follows: - N/A
	<input type="checkbox"/>	In this context the following CARs, CLs, FARs have been raised:
Conclusion	<input checked="" type="checkbox"/>	No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements.
	<input type="checkbox"/>	The raised CARs/CLs/FARs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.
		The actual emission reduction accrued during the monitoring period does not exceed from the estimated value in the registered PoA-DD. The justifications provided were found to be reasonable and the team has verified the underlying facts.

Appendix 1. Abbreviations

Abbreviations	Full texts
CA	Corrective Action / Clarification Action
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CO ₂	Carbon dioxide
CO _{2eq}	Carbon dioxide equivalent
CL	Clarification Request
CME	Co-ordinating Managing Entity
CRT/N	Centre for Rural Technology Nepal
DVerR	Draft Verification Report
ER	Emission Reduction
FAR	Forward Action Request
FWDR	Far Western Development Region
GHG	Greenhouse gas(es)
ICS	Improved cooking stoves
IM	Interview Memo
LPO	Local Partner Organisation
MP	Monitoring Plan
MR	Monitoring Report
PA	Project Activity
PDD	Project Design Document
PCP	Project Cycle Procedure
PP	Project Participant
PS	Project Standard
QA/QC	Quality Assurance / Quality Control
RDSC	Regional Development Service Centre

RETS	Renewable Energy Testing Station
SNV	SNV Netherlands Development Organisation
UNFCCC	United Nations Framework Convention on Climate Change
VDC	Village Development Committee
VVS	Validation and Verification Standard
WBT	Water Boiling Test
XLS	Emission Reduction Calculation Spread Sheet

Appendix 2. Competence of team members and technical reviewers



Statement of Competence
Appointment and authorization according to the procedures
of the TUV NORD JRCOM Certification Program

Ms. Christina Stöhr


SCHEME	STATUS	VALID UNTIL
CDM	Assessor (Validation, Verification) Technical Reviewer	2017-12-12
VCS / ISO 14064-2	Assessor/ Technical Reviewer	

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.1	Thermal energy generation
1.2	Renewables
13.1	Solid waste and wastewater

200 - Rev. 4 Date: 2015-06-09

200_S01-VA050-F03_2014-13-13_v4.docx S01-VA050-F03-w3 / 2013-10-26



Statement of Competence
Appointment and authorization according to the procedures
of the TUV NORD JRCOM Certification Program

Mr. Stefan Winter


SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification) Technical Reviewer	2017-07-27
VCS	Senior Assessor (Validation, Verification) Technical Reviewer	2017-07-27

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA	TR SUBCATEGORIES
1.1	Thermal energy generation	1.2.1 Hydro 1.2.2 Wind 1.2.3 Geothermal 1.2.4 Solar 1.2.5 Total
1.2	Renewable Energy	
2.2	Heat distribution	
3.1	Energy demand	
13.1	Waste handling and disposal	13.1.1 Waste management 13.1.2 Waste water management
13.2	Animal waste management	
13.2	Animal waste management	

163 - Rev. 3, Date: 2014-07-28

163_S01-F03_2014-07-28_v3.docx S01-F03-w1 / 2011-08-02



Statement of Competence
Appointment and authorization according to the procedures
of the TUV NORD JRCOM Certification Program

Mr. Prakash Kumar Mishra

SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor (Validation, Verification)	2017-12-17
VCS / ISO 14064-2	Lead Assessor	2017-12-17

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewables
3.1	Energy demand

146 - Rev. 3, Date: 2015-06-15

146_S01-VA050-F03_2015-06-15_v3.docx S01-VA050-F03-w3 / 2013-10-26

Appendix 3. Documents reviewed or referenced

No.	Author	Reference	Title	References to the document	Provider
1	UNFCCC	/AMS II.G/	Energy efficiency measures in thermal applications of non-renewable biomass"	http://cdm.unfccc.int	Other
2.	SNV	/AGGR/	Usage Survey Agreement between SNV and RDSC, dated 2014-10-18		
3		/ANN-2/	ER calculation spread sheet Version 3 dated 2015-10-03		Other
4		/ANN-3/	Usage Survey Report ver 01, dated April 2015		Other
5		/ANN-4/	Usage Survey Data Analysis ver01 dated 2015-08-23		other
6	RETS	/ANN-6/	WBT Report of ICS RS (1.1,1.3 and 3.1) dated March 2015		Other
7	RETS/Megan	/ANN-7/	WBT Data Analysis sheet dated March 2015		Other
8		/ANN-8/	Sample Size Calculation sheet dated March 2015		Other
9	CME	/ANN-9/	Survey sample selection sheet dated March 2015		Other
10	CME/CRT	/ANN-10/	Detailed Customer Database dated 2015-08-23		CME
11		/SD-CPA01/	Installation completion Receipt for ICF000341 dated 2015-05-23		CME
11		/SD-CPA02/	Installation completion Receipt for ICF021174 dated 2014-03-19		CME
12	DOE	/CPM/	TÜV NORD JI / CDM CP Manual (incl. CP procedures and forms)		Other
13	IPCC	/IPCC/	1. 1996 IPCC Guidelines for National Greenhouse Gas Inventories: work book 2. 2006 IPCC Guidelines for National Greenhouse Gas Inventories: work book	www.ipcc-nggip.iges.or.jp	Other
14	UNFCCC	/KP/	Kyoto Protocol (1997)	http://unfccc.int/kyoto_protocol/items/2830.php	Other
15	UNFCCC	/MA/	Decision 3/CMP. 1 (Marrakesh – Accords)	http://cdm.unfccc.int/Reference/COPMOP/index.html	Other
16	UNFCCC	/MRT/	Monitoring Report Form (CDM-MR-FORM), Version 5.1	https://cdm.unfccc.int/Reference/PDDs_Forms/index.html	Other
17	UNFCCC	/POADD/	Project Design Document for CDM PoA project: "Improved Cook Stove Programme with Carbon Finance (ICF), Nepal" version 06, dated 2013-12-05		Other
18	DOE	/PRC-VLR/	Validation report on post registration changes of CPA#01,	-	Other

No.	Author	Reference	Title	References to the document	Provider
			Dated 2015-10-01		
19	UNFCCC	/PS/	CDM Project Standard (Version 9.0)	http://cdm.unfccc.int/Reference/Standards/index.html	Other
20	PP	/VAL/	Validation Report for CDM project "Improved Cook Stove Programme with Carbon Finance (ICF), Nepal version 01 dated 2013-12-09	09/12/2013	Other
21	Manufacturer	/TECH/	Technical specification of ICS	-	Other
22	UNFCCC	/VVS/	CDM Validation and Verification Standard (Version 09.0)	http://cdm.unfccc.int/Reference/Standards/index.html	Other
23	UNFCCC	/G-SS/	"Guidelines for Sampling and Surveys for CDM Project Activities and Programme Activities" (Version 03.0) "Standard for Sampling and Surveys for CDM Project Activities and Programme Activities" (version 4.1)	https://cdm.unfccc.int/Reference/Guidclarif/index.html http://cdm.unfccc.int/Reference/Standards/index.html	Other
24	UNFCCC	/GOT/	Glossary "CDM terms" (version 08.0)	https://cdm.unfccc.int/filestorage/e/x/t/extfile-20150226124447549-glos_CDM.pdf/glos_CDM.pdf?t=UmZ8bnFjODI3fDCW9A3vJwR03kQQh4sbLiYu	Other
25	PP	/MR/	"Improved Cook Stove Programme with Carbon Finance (ICF), Nepal" Ver 01, dated 22/04/2015 Ver 02, dated 23/08/2015 Ver 03, dated 03/10/2015		CME
26	PP	/WBT-PRT/	Water boiling Test protocol version 4.2.2 dated 22/04/2013		CME
27	PP	/TRNG/ /ANN-16-17/	<ul style="list-style-type: none"> Annual Report of CRT/N covering Jan 2013 to Dec 2013 dated Jan 2014 Annual Report of CRT/N covering Jan to Oct 2014 dated Nov 2014 Usage Survey report attachment 		Other
28	Scott Wilson Nepal Pvt. Ltd.	/BLS/	Baseline survey report for Improved Cook Stoves (ICS) Programme in Hilly Districts of Far Western Development Region dated December 2012.		CME

Appendix 4. Clarification requests, corrective action requests and forward action requests

Table 3. Remaining FAR from validation and/or previous verification

FAR ID		Section no.		Date: DD/MM/YYYY
Description of FAR				
NO FAR is raised during the verification.				
Project participant response (1st round)				Date: DD/MM/YYYY
Documentation provided by project participant (1st round)				
<input type="checkbox"/>	Changes in the PoA-DD	Section(s):	New version No.:	
<input type="checkbox"/>	Changes in the CPA-DD	Section(s):	New version No.:	
<input type="checkbox"/>	Changes in MR	Section(s):	New version No.:	
<input type="checkbox"/>	Changes in XLS	Worksheet(s):	New version No.:	
<input type="checkbox"/>	Other:			
DOE assessment (1st round)				Date: DD/MM/YYYY
Conclusion <i>Tick the appropriate checkbox</i>		<input type="checkbox"/> Additional action should be taken (finding remains open) <input type="checkbox"/> The finding is closed		

Table 4. CL from this verification

CL ID	CL D1	Section no.	D.1	Date: 27/07/2015
Description of CL				
<p>Section D.1 of the webhosted MR mentioned that a total of 869 RS 3.1 technologies have been deployed in the project activity and due to user's complain, CPA implementer has decided to replace all those devices with RS 1.3.</p> <p>Although, it is also mentioned that PP has decided not to claim any CERs accrued RS 3.1, the replacement RS 1.3 over 3.1 shall be claimed for CER calculation from the date of its installation.</p> <p>PP is requested to clarify the provision/steps to avoid any double counting/over estimation of CERs in the said process as the date of installation for the system being replaced and RS 1.3 is different.</p>				
Project participant response (1st round)				Date: 23/08/2015
<p>No current or replaced RS3.1 ICS is credited during this monitoring period. Section D.1 has been revised to state the following:</p> <p>While some households continue to use their RS3.1 model and are pleased with fuel savings and usage, the project conservatively chooses not to credit any RS3.1 ICS. As demonstrated in the database, 665 households that received an RS3.1 had it replaced by an RS1.3. When the replacement is made, the stove promoter only replaces the combustion chamber, not the top plate on which the serial number is engraved. As such, the serial number does not change; therefore there is only one entry in the database for the household and ICS. The replacement is indicated in the PoA Distribution and Monitoring Database through updating the 'Stove Type' to current model (RS1.3) and adding the previous model (RS3.1) and month that the replacement ICS was installed in the 'Remarks' field. However, due to insufficient record keeping on the date of installation of the replacement, these ICS are not credited during this monitoring period. The ICS remains in the database to be credited in the next monitoring period. No CERs are accrued for the days of RS3.1 operation prior to replacement.</p>				
Documentation provided by project participant (1st round)				
<input type="checkbox"/>	Changes in the PoA-DD	Section(s):	New version No.:	
<input type="checkbox"/>	Changes in the CPA-DD	Section(s):	New version No.:	

CL ID	CL D1	Section no.	D.1	Date: 27/07/2015
<input checked="" type="checkbox"/>	Changes in MR		Section(s): D.1	New version No.: 02
<input checked="" type="checkbox"/>	Changes in XLS		Worksheet(s): ER (Ann3)	New version No.: 02
<input type="checkbox"/>	Other:			
DOE assessment (1st round)				Date: 03/09/2015
<p>Section D.1 of the revised MR is checked and found revised with regards to not making any claim from the replacement of RS 3.1 during current monitoring period. Verification team has assessed the revised ER calculation spread sheet^{/ANN-2/} which found excluded the total deployed RS 3.1 for accounting ER for the current monitoring period and also compared the detailed PoA monitoring database for the total number of ICS deployed under the current monitoring period. It is observed during the onsite inspection, that PoA has the provision to enter the deployed ICS only types after checking/reviewing the installation completion receipt from the CPA implementer who sends the data.</p> <p>Each ICS was found with unique serial number, which avoids the chances of double counting in the CPA.</p> <p>CL is closed out.</p>				
Conclusion <i>Tick the appropriate checkbox</i>		<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

Table 5. CAR from this verification

CAR ID	CAR D2	Section no.	D.1	Date: 27/07/2015
Description of CAR				
<p>In section D.1 page 25 of the MR under (c, relevant dates.....), start date of program is mentioned as "22/05/2013" which neither matches with start date of CPAs as mentioned under table 9 and start date of PoA "22/05/2013".</p> <p>Moreover, CPA02 start date is not correct as verified from the validated CPA02 from the PoA 9811 web page from unfccc website (19/03/2014). Please also substantiate the start date of CPA01.</p>				
Documentation provided by project participant (1st round)				
<p>Section D.1 has been revised to clarify that the start date of the PoA is 22/05/2013, as stated in the registered PoA-DD, the date of upload to the UNFCCC website for Global Stakeholder Consultation.</p> <p>CPA # 02 start date has been corrected to 19/03/2014, as stated in the validated CPA # 02 CPA-DD. Scanned copy of Sales Agreement and Installation Completion Receipt of first ICS included in CPA # 02, installed on 19/03/2014, has been provided.</p> <p>CPA # 01 start date has been corrected to 23/05/2013. As the CPA start date was not specified in the registered CPA-DD, the start date of 23/05/2013 has been applied in the CPA-DD in the Post-Registration Change that shall be submitted with the MR. Scanned copy of Sales Agreement and Installation Completion Receipt of first ICS included in CPA # 01, installed on 23/05/2013, has been provided.</p>				
Project participant response (1st round)				Date: 23/08/2015
<input type="checkbox"/>	Changes in the PoA-DD		Section(s):	New version No.:
<input checked="" type="checkbox"/>	Changes in the CPA-DD		Section(s):	New version No.: 07
<input checked="" type="checkbox"/>	Changes in MR		Section(s):	New version No.: 02
<input type="checkbox"/>	Changes in XLS		Worksheet(s):	New version No.:
<input type="checkbox"/>	Other:			
DOE assessment (1st round)				Date: 03/09/2015
<p>Section D.1 of the revised MR is found revised with regards to the start date of CPA01 and CPA02 in line with the registered PoA –DD and validated CPA01 and CPA02. PP has submitted the proof of CPAs start dates^{/SD/} and found to be in line with the mentioned start dates in MR. Moreover, a PRC has been applied along with this verification report and CPA#01 has included the exact CPA start date (23/05/2013). In the registered PoA DD it was mentioned as "The start date of the CPA # 01 is after the start date of PoA- 22/05/2013 – the date of upload to the UNFCCC website for Global Stakeholder Consultation". For detailed information please refer PRC CPA#01 PRC opinion report^{/PRC-VLR/}.</p>				
Conclusion <i>Tick the appropriate checkbox</i>		<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

CAR ID	D3	Section no.		Date: 27/07/2015
Description of CAR				
<p>Number of total ICS installed for both the CPAs (CPA01-CPA02) varies from the total number of ICS provided under table 10 of section D.1.</p> <p>Moreover, table 10 provides only installation of ICS up to January 2015 under this verification, however the current monitoring period is 19/12/2013 - 01/04/2015.</p> <p>A justification is required with appropriate reference/evidence.</p>				
Documentation provided by project participant (1st round)				
<p>Table 10 has been updated to reflect total number of ICS installed in CPA # 01 and CPA # 02, which were installed from start date of CPA # 01, 23/05/2013 through the end of the current monitoring period, 01/04/2015.</p> <p>This change is reflected in MR, ER calculation - "Annex2" and ANNEX 10 - Detailed Customer Database, worksheet '1. Summary' and '2. PoA 9811'.</p>				
Project participant response (1st round)				Date: 23/08/2015
<input type="checkbox"/>	Changes in the PoA-DD	Section(s):	New version No.:	
<input type="checkbox"/>	Changes in the CPA-DD	Section(s):	New version No.:	
<input checked="" type="checkbox"/>	Changes in MR	Section(s):02	New version No.: 02	
<input checked="" type="checkbox"/>	Changes in XLS	Worksheet(s): Annex 2 and 10	New version No.: 02	
<input type="checkbox"/>	Other:			
DOE assessment (1st round)				Date: 03/09/2015
<p>Revised MR under section D.1 is assessed and found corrected with regards to the total number of ICS deployed are :</p> <p style="text-align: center;">CPA # 01: 19,141 CPA # 02: 14,948</p> <p>during current verification period. Revised detailed customer database^{/Ann-10/}, ER calculation spreadsheet^{/Ann-2/} have been also verified and found in consistency with the revised MR.</p> <p>Car D3 is successfully closed.</p>				
Conclusion <i>Tick the appropriate checkbox</i>		<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

CAR ID	CAR F1	Section no.	F	Date: 27/27/2015
Description of CAR				
<p>Section F of the webhosted MR does not sufficiently and clearly provide with information flow including data generation (raw data generation to submission of the final data), aggregation, recording, calculations and reporting, and emergency procedures for the monitoring system.</p> <p>Please refer § 246 of PS and section F CDM-PoA-MR-FORM version 01.</p>				
Documentation provided by project participant (1st round)				
<p>Section F has been updated to include diagram and further information detailing data generation, aggregation, recording, calculations and reporting, and emergency procedures for the monitoring system for:</p> <ul style="list-style-type: none"> - Part 1: PoA Distribution and Monitoring Database - which is used to derive the two monitored parameters, N_{all} and $Stove_{year}$. Details are provided as to how the information feeds into the database, roles and responsibilities of partners, and QA/QC activities to ensure security of the data. - Part 2: Usage Survey and Part 3: WBT Survey - which are used to derive values for monitored parameters SOF, fold, and η_{new}. Details and diagram included detailing how CME manages monitoring process, roles and responsibilities of monitoring partners, information flows of data, and measures to ensure security of data. 				
Project participant response (1st round)				Date: 23/08/2015
<input type="checkbox"/>	Changes in the PoA-DD	Section(s):	New version No.:	
<input type="checkbox"/>	Changes in the CPA-DD	Section(s):	New version No.:	
<input checked="" type="checkbox"/>	Changes in MR	Section(s): F	New version No.: 02	
<input type="checkbox"/>	Changes in XLS	Worksheet(s):	New version No.:	
<input type="checkbox"/>	Other:			
DOE assessment (1st round)				Date: 03/09/2015

CAR ID	CAR F1	Section no.	F	Date: 27/27/2015
<p>Section F of the revised MR is assessed and found appropriately included with the information on procedure followed for data generation, aggregation, monitoring and recording of all the parameters in detail. A clear roles and responsibility with flow of information is also found included in the revised MR, which are in line with onsite visit and interview with the CME, CPA implementer, ICS users and consultant.</p> <p>Based on above VT considered action taken as appropriate and CAR F1 is closed successfully/</p>				
Conclusion <i>Tick the appropriate checkbox</i>		<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

CAR ID	G1	Section no.		Date: 27/07/2015
Description of CAR				
<p>Under section G.1 the “choice of data or measurement method and procedure” found left blank and not in line with registered PoA DD and validated CPA-DD.</p>				
Documentation provided by project participant (1st round)				
<p>The section of each parameter box in G.1 “choice of data or measurement method and procedure” has been updated to reflect the information provided in the registered PoA-DD and CPA-DDs.</p>				
Project participant response (1st round)				Date: 23/08/2015
<input type="checkbox"/>	Changes in the PoA-DD	Section(s):	New version No.:	
<input type="checkbox"/>	Changes in the CPA-DD	Section(s):	New version No.:	
<input checked="" type="checkbox"/>	Changes in MR	Section(s): G.1	New version No.: 02	
<input type="checkbox"/>	Changes in XLS	Worksheet(s):	New version No.:	
<input type="checkbox"/>	Other:			
DOE assessment (1st round)				Date: 03/09/2015
<p>Section G.1 of the revised MR is assessed and found correctly filled with “choice of data or measurement method and procedure” of each parameter in line with registered PoA-DD and CPA DDs.</p> <p>CAR is successfully closed out.</p>				
Conclusion <i>Tick the appropriate checkbox</i>		<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

CAR ID	G2	Section no.	G.2	Date: 27/07/2015
Description of CAR				
<p>The Value of the parameter “E_{Saving,appliance}” under section G.2 is not consistent with ER calculation spread-sheet (0.0094, which is also rounded up value and hence shall be rounded down).</p>				
Documentation provided by project participant (1st round)				
<p>The value of the parameter “E_{Saving,appliance}” has been updated to reflect the value in the ER calculation spreadsheet of 0.009, as demonstrated in ANNEX 2 - ER Calculations. The value is demonstrated up to 3 decimal points, though calculation in excel uses a more precise value to reduce errors due to rounding.</p> <p>The value is provided in worksheet ‘2. ER Calcs’, cell I29.</p>				
Project participant response (1st round)				Date: 23/08/2015
<input type="checkbox"/>	Changes in the PoA-DD	Section(s):	New version No.:	
<input type="checkbox"/>	Changes in the CPA-DD	Section(s):	New version No.:	
<input checked="" type="checkbox"/>	Changes in MR	Section(s): 02	New version No.:	
<input checked="" type="checkbox"/>	Changes in XLS	Worksheet(s): 2(ANN-2)	New version No.: 02	
<input type="checkbox"/>	Other:			
DOE assessment (1st round)				Date: 03/09/2015
<p>Revised MR was assessed and found that value for parameter “E_{Saving,appliance}” has made consistent with the value in the ER calculation spread sheet with precise value after decimal points for the purpose of calculating emission reduction.</p> <p>CAR G2 is closed successfully.</p>				
Conclusion <i>Tick the appropriate checkbox</i>		<input type="checkbox"/> Additional action should be taken (finding remains open) <input type="checkbox"/> The finding is closed		

CAR ID	G3	Section no.	G.2	Date: 27/07/2015
Description of CAR				
The value of parameter "N _{CPA} " under section G.2 is not in line with value provided in ER calculation in spread sheet "cell I 36".				
Documentation provided by project participant (1st round)				
The value of parameter "N _{CPA} " has been corrected in section G.2 to reflect value provided in ANNEX 2 - ER Calculations_Issuance 1_v2, worksheet '2. ER Calcs', cell I36.				
Project participant response (1st round)				Date: 23/08/2015
<input type="checkbox"/>	Changes in the PoA-DD	Section(s):	New version No.:	
<input type="checkbox"/>	Changes in the CPA-DD	Section(s):	New version No.:	
<input checked="" type="checkbox"/>	Changes in MR	Section(s): G.2	New version No.:02	
<input type="checkbox"/>	Changes in XLS	Worksheet(s):	New version No.:	
<input type="checkbox"/>	Other:			
DOE assessment (1st round)				Date: 03/09/2015
Revised MR is found to provide with correct value in line with the ER calculation spread sheet (ANN-2).				
CAR G3 is closed out.				
Conclusion <i>Tick the appropriate checkbox</i>		<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

CAR ID	G4	Section no.	G.2	Date: 27/07/2015
Description of CAR				
Monitoring frequency of parameter "SOF" is not in accordance with registered PoA DD/CPA-DDs which requires "At least biennially, likely to be done annually." Also, exact reference to the values used is required to be provided.				
Additionally, evidence that CME has provided the training to third party (RDSC) and RPOs.				
Documentation provided by project participant (1st round)				
Monitoring frequency of parameter "SOF" has been corrected to state "At least biennially, likely to be done annually" in accordance with registered PoA-DD.				
Exact reference to the values used is included in section 'Source of Data', specifically ANNEX 4 - Usage Survey Data Analysis, SOF value provided in worksheet '3. Summary Tables', cell D8.				
Evidence that CME has provided the training to third party (RDSC) and RPOs has been included, referencing ANNEX 3 - Usage Survey Report, which includes agenda, attendance sheet, and photos from training provided by CME (SNV) to RDSC.				
Project participant response (1st round)				Date: 23/08/2015
<input type="checkbox"/>	Changes in the PoA-DD	Section(s):	New version No.:	
<input type="checkbox"/>	Changes in the CPA-DD	Section(s):	New version No.:	
<input checked="" type="checkbox"/>	Changes in MR	Section(s): G.2	New version No.: 02	
<input type="checkbox"/>	Changes in XLS	Worksheet(s):	New version No.:	
<input type="checkbox"/>	Other:			
DOE assessment (1st round)				Date: 03/09/2015
Revised MR under section G.2 is found corrected with Monitoring frequency of parameter "SOF" in line with registered PoA-DD and CPA-DDs.				
Reference to the value applied is also found provided and corresponding reference (ANNEX-4) was verified to be correct. Evidence for the training provided to the third party RDSC is found provided as part of usage report ^{/ANN-3/} as well as other relevant stakeholders in CRT/N annual reports ^{/ANN-16-17/} and hence CAR G4 is closed successfully.				
Conclusion <i>Tick the appropriate checkbox</i>		<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

CAR ID	G5	Section no.	G.2	Date: 27/07/2015
Description of CAR				
Measuring frequency of the parameter "f _{old} " is not in line with the registered PoA DD, which ask for "at least biennial or most likely annual monitoring". Moreover, exact reference for the value used is to be provided.				
Documentation provided by project participant (1st round)				
Monitoring frequency of parameter "f _{old} " has been corrected to state "At least biennially, likely to be annually" in accordance with registered PoA-DD. Exact reference to the values used is included in section 'Source of Data', specifically ANNEX 4 - Usage Survey Data Analysis, SOF value provided in worksheet '3. Summary Tables', cell D9.				
Project participant response (1st round)				Date: 23/08/2015
<input type="checkbox"/>	Changes in the PoA-DD	Section(s):	New version No.:	
<input type="checkbox"/>	Changes in the CPA-DD	Section(s):	New version No.:	
<input checked="" type="checkbox"/>	Changes in MR	Section(s): G.2	New version No.: 02	
<input type="checkbox"/>	Changes in XLS	Worksheet(s):	New version No.:	
<input type="checkbox"/>	Other:			
DOE assessment (1st round)				Date: 03/09/2015
Revised MR under section G.2 is found corrected with Monitoring frequency of parameter "f _{old} " in line with registered PoA-DD and CPA-DDs. Reference to the value applied is also found provided and corresponding reference (ANNEX-4) was verified to be correct in this regard. CAR G5 is successfully closed out.				
Conclusion <i>Tick the appropriate checkbox</i>		<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

CAR ID	H1	Section no.	H	Date: 27/07/2015
Description of CAR				
In the section H of monitoring report, all the value used for calculation of accrued emission reduction for CPA01 and CPA02 under the current monitoring period shall be provided with appropriate and accurate reference/sources. Also the reference to the electronic spread sheet is not provided under section H. Please refer CDM-PoA-MR-FORM version 01, PS § 248.				
Documentation provided by project participant (1st round)				
Column 'Ref. Cell' added to all tables in Section H to indicate exact location of parameter value in ANNEX 2 - ER Calculations, worksheet '2. ER Calc Steps'.				
Further, if parameter is monitored and value is derived in other annex, 'Source of Value' column in all tables in section H has been updated to include Annex #, worksheet name, and cell number. More detailed reference is also provided for source of each number in ANNEX 2 - ER Calculations, worksheet '2. ER Calc Steps', column K 'Source of Value' to reflect added detail in MR.				
Project participant response (1st round)				Date: 23/08/2015
<input type="checkbox"/>	Changes in the PoA-DD	Section(s):	New version No.:	
<input type="checkbox"/>	Changes in the CPA-DD	Section(s):	New version No.:	
<input checked="" type="checkbox"/>	Changes in MR	Section(s): G.2	New version No.: 02	
<input checked="" type="checkbox"/>	Changes in XLS	Worksheet(s): 2.ANN-2	New version No.: 02	
<input type="checkbox"/>	Other:			
DOE assessment (1st round)				Date: 03/09/2015
Section "H" of the revised MR is found provided with appropriate reference sources for all the values used for calculation of emission reduction calculation. References were cross checked from the sources provided and found correct, hence, CAR H1 is closed successfully.				
Conclusion <i>Tick the appropriate checkbox</i>		<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

Table 6. FAR from this verification

FAR ID	NA	Section No.	NA	Date: DD/MM/YYYY
Description of FAR				
Project participant response				Date: DD/MM/YYYY
Documentation provided by project participant				
<input type="checkbox"/>	Changes in the PoA-DD	Section(s):	New version No.:	
<input type="checkbox"/>	Changes in the CPA-DD	Section(s):	New version No.:	
<input type="checkbox"/>	Changes in MR	Section(s):	New version No.:	
<input type="checkbox"/>	Changes in XLS	Worksheet(s):	New version No.:	
<input type="checkbox"/>	Other:			
DOE assessment				Date: DD/MM/YYYY
Conclusion <i>Tick the appropriate checkbox</i>		<input type="checkbox"/> To be checked during the next periodic verification		

Appendix 5. Monitored Parameters

Table A-5: Periodic Verification Checklist – Monitored Parameters

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
A. E_{Saving,appliance}		Average annual energy saving per ICS distributed		
<p>a) Measurement / Determination method (VVS, §§ 389-393) Describe how the monitoring parameter was measured / determined. Focus primarily on the original data level (ODL) but also describe the applied data aggregation trails (from ODL to data aggregation level zero (DAL0)). Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements. Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</p>	<p>/IM01/ /POADD/ /AMS II.G/ /MR/ /WBT/</p>	<p><i>Description:</i> This parameter is calculated from $B_{y,savings}$ and $NCV_{biomass}$. It covers the average annual energy savings by a single ICS deployed under the project activity. The procedure to calculate this parameter is derived from the equation 5 of the registered PoA-DD and all the values used to calculate are also from the methodology applied. There has not been any exchanged of the equipment and appliance during current monitoring period. The parameter is calculated at the start of the verification process.</p> <p><i>Verifier's action:</i> PoA-DD, applied methodology, AMS II.G Version 05, ER spread sheet and MR were checked.</p> <p><i>Conclusion:</i> Calculation approach and applied values are found to be in conformity with registered PoA-DD, AMS II.G version 05, WBT report and found to be appropriate.</p>	OK	OK
<p>b) Accuracy and QA/QC Procedure (VVS, §§ 394-400) In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs. Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line</p>	<p>/CAL/ /MM/ /PoA-DD/ /AMS II.G/ /BLS/ /XLS/</p>	<p><i>Description:</i> The calculation of this parameter is done through the fixed values from the baseline survey conducted in 2012 by third party assessment, Registered PoA-DD, applied methodology. No calibration of equipment related with this parameter is applicable.</p> <p><i>Verifier's action:</i> The verification team reviewed the relevant documents e.g. baseline survey report^{/BLS/}, WBT report^{/WBT/}, related spread sheet, PoA-DD, MR, applied meth and interviewed CME, consultant, surveyors, field staff to determine whether the measurements were done correctly.</p> <p><i>Conclusion:</i> The value is determined according to the</p>	CAR G2	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>with the latest EB guidance. Include calibration dates and information in validity of the installed monitoring equipment in the table in Annex 2.</i>		methodology. Measurement and calculation procedure and frequency of this parameter is found to be appropriate However, CAR G2 on the mismatch of value in the ER sheet and MR was raised and closed successfully during the course of verification.		
c) Correctness (VVS, §§ 389-393) <i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner. In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given. In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i>	/MR/	<input checked="" type="checkbox"/> Correct <input type="checkbox"/> Not correct (initial assessment) <i>Description:</i> Value for this parameter given in the MR is CPA#1 : 0.009 GWh/year CPA#2 : 0.009 GWh/year It is consistent with the ER calculation spread sheet ^{/Ann-2/} , and survey reports ^{/BLS/WBT/} <i>Verifier's action:</i> Value has been cross checked in MR, ER calculation spread sheet, test and survey rept. <i>Conclusion:</i> Value of 0.009 is found to be correct, however please refer CAR G2.	CAR G2	OK
B. $f_{NRB,y}$		Fraction of woody biomass saved by the project activity in year y that can be established as non-renewable biomass		
a) Measurement / Determination method (VVS, §§ 389-393) <i>Describe how the monitoring parameter was measured / determined. Focus primarily on the original data level (ODL) but also describe the applied data aggregation trails (from ODL to data aggregation level zero (DAL0)). Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used.</i>	/IM01/ /POADD/ / MR/ /Ann-2/ /UNFCC/ /AMS II.G/	<i>Description:</i> The value of this parameter is National value for Nepal which is approved by UNFCCC and the Ministry of Environment, Science and Technology of Nepal. It is confirmed annually during this monitoring period through the CDM website, which shows the national value approved for Nepal. <i>Verifier's action:</i> MR, PoA-DD, applied methodology and UNFCCC website regarding the fraction of woody biomass value has been checked. <i>Conclusion:</i> Monitoring frequency and values of this parameter are correctly applied during the current monitoring period.	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>Furthermore, verify the frequency of measurements as per the requirements.</p> <p>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</p>				
<p>b) Accuracy and QA/QC Procedure (VVS, §§ 394-400)</p> <p>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</p> <p>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</p> <p>Include calibration dates and information in validity of the installed monitoring equipment in the table in Annex 2.</p>	<p>/IM01/ /POADD/ /MR/ /Ann-2/ /UNFCC/ /AMS II.G/</p>	<p>Description: No equipment is used by the CME/PP to measure the value, as this is a default value approved by UN for LDCs, which was verified during current monitoring period. NO QA/QC is applicable for this parameter.</p> <p>Verifier's action: UN website⁵, MR, spread sheet, PoA DD were verified in this regards</p> <p>Conclusion: Monitoring frequency and values of this parameter are correctly applied. The values are accurate and correct.</p>	OK	OK
<p>c) Correctness (VVS, §§ 389-393)</p> <p>Determine whether the value given in the monitoring report is correct or determined in</p>	<p>/IM01/ /POADD/ /MR/ /Ann-2/</p>	<p><input checked="" type="checkbox"/> Correct <input type="checkbox"/> Not correct (initial assessment)</p> <p>Description: CPA#1 : 0.86 (2013 – 2015) CPA#2 : 0.86 (2013 – 2015)</p>	OK	OK

⁵ <http://cdm.unfccc.int/DNA/fNRB/index.html>

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>a conservative manner.</p> <p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>	/UNFCC/ /AMS II.G/	<p>the value presented in the MR is approved, by UNFCCC and Ministry of Environment, Science and Technology of Nepal.</p> <p>Verifier's action: Value of this parameter in MR is cross - checked with emission reduction calculation spread-sheet, PoA-DD, UN website for approved default values of fraction of woody biomass.</p> <p>Conclusion: Value applied in the MR is correct and accurate for the current monitoring period</p>		
C. N_{CPA}		Maximum number of appliances in one CPA to reach small scale threshold of 180 GWh(th)		
<p>a) Measurement / Determination method (VVS, §§ 389-393)</p> <p><i>Describe how the monitoring parameter was measured / determined. Focus primarily on the original data level (ODL) but also describe the applied data aggregation trails (from ODL to data aggregation level zero (DAL0)).</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	/IM01/ /POADD/ /AXXX/ /DATABASE/ SE/	<p>Description: The maximum number of appliances in one CPA is determined as the product of average annual energy saving per ICS distributed and maximum number of ICS under the individual CPA. This value is taken from PoA Monitoring and Distribution Database^{/DATABASE/}. It is determined at the end of the monitoring period.</p> <p>Verifier's action: PoA Monitoring and Distribution Database^{/DATABASE/}, ER calculation spread-sheet^{/Ann-2/}, PoA-DD is verified.</p> <p>Conclusion: Calculation approach and applied values are found to be in conformity with registered PoA-DD, ER calculation spread sheet, AMS II.G version 05, and verified PoA Monitoring and Distribution Database^{/DATABASE/}. The monitoring frequency is in line with the registered CPA-DD.</p> <p>Moreover, CAR D3 and CAR G3 were raised .</p>	CAR D3 CAR G3	OK
b) Accuracy and QA/QC Procedure	/MM/	Description: This parameter does not involve any QA/QC procedure however CME ensures the recording of deployed	CAR D3	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>(VVS, §§ 394-400)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p> <p><i>Include calibration dates and information in validity of the installed monitoring equipment in the table in Annex 2.</i></p>	/RECIPT/	<p>stoves under an individual CPA is accurate by means of verification of recorded data against back up evidences e.g. sales agreement and installation completion receipts^{/RECEIPTS/}.</p> <p>Verifier's action: PoA-DD, PoA Monitoring and Distribution Database^{/DATABASE/}, ER calculation spread sheet^{/Ann-2/} and sample sales agreement and installation completion receipts^{/RECEIPTS/} of stoves were verified.</p> <p>Conclusion: The value of this parameter is accurate and the monitoring frequency is in conformity with the PoA-DD and CPA-DD.</p>	CAR G3	
<p>c) Correctness (VVS, §§ 389-393)</p> <p><i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i></p> <p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>	/MR/	<p><input checked="" type="checkbox"/> Correct <input type="checkbox"/> Not correct (initial assessment)</p> <p>Description:</p> <p style="padding-left: 40px;">CPA#1 : 19,322 GWh(th) CPA#2 : 19,322 GWh(th)</p> <p>The values correspond to the net energy saving of 174 GWh(th) in a year and they are within SSC threshold of 180 GWh(th).</p> <p>Verifier's action: PoA-DD, CPA-DD, MR, excel spread sheet^{/Ann-2/}, POA Monitoring Distribution aster data sheet were verified.</p> <p>Conclusion: Monitoring of this parameter and value presented in the MR is correct.</p>	CAR D3 CAR G3	OK
D. N_{y,i}		Number of project devices of type i operating in year y		

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>a) Measurement / Determination method (VVS, §§ 389-393)</p> <p><i>Describe how the monitoring parameter was measured / determined. Focus primarily on the original data level (ODL) but also describe the applied data aggregation trails (from ODL to data aggregation level zero (DAL0)).</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	<p>/IM01/ /POADD/ /AMS II.G/ /Ann-2/ /US/</p>	<p>Description: The number of project devices of type is calculated based on the value of measure parameter SOF and average use of stove per year, at the end of the monitoring period.</p> <p>Verifier's action: PoA Monitoring and Distribution database, emission reduction calculation spread sheet and SOF survey report^{/US/} were assessed and CME, monitoring personnel, personnel conducted survey were interviewed.</p> <p>Conclusion: The measurement and calculation procedure of this parameter is in line with registered PoA-DD, CPA-DD, and usage survey.</p>		
<p>b) Accuracy and QA/QC Procedure (VVS, §§ 394-400)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has</i></p>	<p>/CAL/ /MM/</p>	<p>Description: This parameter does not involve any calibration of equipment however CME ensures the competencies of personnel involved in the monitoring of this parameter by providing the training and verifying the records before entering into the master database. The calculation frequency is within the, at least, two-year period.</p> <p>Verifier's action: PoA-DD, MR, spread sheet and usage survey report and data analysis sheet were reviewed. Also during onsite audit CME, representatives of Usage survey group, and consultant were interviewed.</p> <p>Conclusion: Measurement and calculation procedure and frequency of this parameter is found to be appropriate.</p>		

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>been carried out in line with the latest EB guidance.</i></p> <p><i>Include calibration dates and information in validity of the installed monitoring equipment in the table in Annex 2.</i></p>				
<p>c) Correctness (VVS, §§ 389-393)</p> <p><i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i></p> <p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>	/MR/	<p><input checked="" type="checkbox"/> Correct <input type="checkbox"/> Not correct (initial assessment)</p> <p>Description:</p> <p>Number of ICS under operation are as follows: CPA # 01: 17,227 CPA # 02: 2,739</p> <p>They are calculated from the equation#4 of the registered PoA-DD and the values applied were taken from the data base and usage survey report.</p> <p>Verifier's action: MR was cross checked from the registered PoA-DD, emission reduction calculation spread sheet^{/Ann-2/}, Usage Survey report^{/US/} and onsite interview with users and CME, CPA implementer and consultant.</p> <p>Conclusion: Value of this parameter presented in MR is found to be correct.</p>		
E. N_{all}		Total number of ICS installed in a given monitoring period in CPA # 01 and CPA # 02		
<p>a) Measurement / Determination method (VVS, §§ 389-393)</p> <p><i>Describe how the monitoring parameter was measured / determined. Focus primarily on the original data level (ODL) but also describe the applied data aggregation trails (from ODL to data aggregation level zero (DAL0)).</i></p>	<p>/IM01/ /POADD/ /RECEIPT/ /MR/ /DATABASE/</p>	<p>Description: CME has developed a procedure to ensure the accuracy of the data before entering into the master data sheet^{/DATABASE/} for monitoring and audit purposes. All back evidences e.g. installation competition receipts and sales agreements for the ICS deployed under the CPAs were found maintained at the CME and CPA implementer's office.</p> <p>The number of ICS installed is determined at the end of the monitoring period from the PO database.</p>	CAR D3	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>		<p>No monitoring equipment is transferred and monitoring frequency is in line with the registered PoA-DD and applied methodology.</p> <p>Verifier's action: Interviews were conducted, PoA-DD, MR, master data sheet and sample records were verified.</p> <p>Conclusion: The measurement procedure and data recording is as per the provision in the registered PoA-DD and CPA-DD however CAR D3 was raised.</p>		
<p>b) Accuracy and QA/QC Procedure (VVS, §§ 394-400)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p> <p><i>Include calibration dates and information in validity of the installed monitoring equipment in the table in Annex 2.</i></p>	<p>/IM01/ /POADD/ /RECEIPT/ /MR/ /DATABASE/</p>	<p>Description: CME has developed a procedure to ensure the accuracy of the data before entering into the master data sheet^{/DATABASE/} for monitoring and audit purposes. All back evidences e.g. installation competition receipts and sales agreements for the ICS deployed under the CPAs were found maintained at the CME and CPA implementer's office.</p> <p>The number of ICS installed is determined at the end of the monitoring period from the PO database.</p> <p>No monitoring equipment is transferred and monitoring frequency is in line with the registered PoA-DD and applied methodology.</p> <p>Verifier's action: Interviews were conducted, PoA-DD, MR, master data sheet and sample records were verified.</p> <p>Conclusion: The measurement procedure and data recording is as per the provision in the registered PoA-DD and CPA-DD however CAR D3 was raised.</p>	CAR D3	OK
<p>c) Correctness (VVS, §§ 389-393)</p>	<p>/IM01/ /POADD/ /RECEIPT</p>	<p><input checked="" type="checkbox"/> Correct <input type="checkbox"/> Not correct (initial assessment)</p> <p>Description: Please refer above and CAR D3.</p>	CAR D3	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</p> <p>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</p> <p>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</p>	T/ /MR/ /DATABASE/ SE/	<p>Verifier's action:</p> <p>Conclusion: CAR D3 was raised.</p>		
F. SOF		Stove Operation Fraction – used to determine the share of distributed stoves that are still operating		
<p>a) Measurement / Determination method (VVS, §§ 389-393)</p> <p>Describe how the monitoring parameter was measured / determined. Focus primarily on the original data level (ODL) but also describe the applied data aggregation trails (from ODL to data aggregation level zero (DAL0)).</p> <p>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</p> <p>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</p>	/IM01/ /POADD/ /AMS II.G/ /ANN-4/ /AGGR/ /USDA/ /US/	<p>Description: Parameter SOF is measured through the survey of the sampled population in FWDR region where the CPA#1 and CPA#2 are implemented. CME has contracted a third party RDSC to conduct the survey. As per the survey conducted during January-March 2015 CME has arrived to a value of 84% of the deployed stoves under CPAs are in operation. Sample was selected using multi stage sampling of cross CPAs (CPA01 and CPA02).</p> <p>Value for parameter is determined applying the Hansen Hurwitz estimator to account for multi-stage sampling approach. In case that the value does not meet 95/10 confidence precision level required for cross-CPA sampling, the lower bound of the confidence interval is conservatively applied.</p> <p>Verifier's action: PoA-DD, MR, Usage survey agreement^{/AGGR/} with RDSC dated 18 Oct 2015, Usage Survey Report, Usage Survey Analysis Data Analysis sheet^{/Ann-6//USDA/}, ER calculation spread sheet were assessed along with onsite visit interview with all relevant stakeholder's including ICS end users.</p>		

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		Conclusion: Measurement method of this parameter is found to be in accordance with the registered PoA-DD, CPA-DDs, applied methodology AMS II.G version 05.		
<p>b) Accuracy and QA/QC Procedure (VVS, §§ 394-400)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p> <p><i>Include calibration dates and information in validity of the installed monitoring equipment in the table in Annex 2.</i></p>	<p>/CPA-DD/ /PoADD/ /AMS II.G./ /MM/ /USR/ /USDA/ /IM/</p>	<p>Description: There is no equipment involved during usage survey, which requires calibration, by the CME/CPA implementer neither required by the registered monitoring plan.</p> <p>ICS users were interviewed and there inputs were recorded in an application installed in mobile phones of surveyors which in turn downloaded in the central data bases system once the survey questions are complete and all set of required information were correctly entered.</p> <p>Verifier's action: Registered monitoring plan, MR, applied methodology, usage survey report and analysis sheet were verified. Representative from Usage Survey team along with the CME/CPA implementer and consultant were also interviewed during the onsite visit.</p> <p>Conclusion: Measurement and calculation procedure of this parameter is found to be appropriate. Moreover CAR G4 was raised and closed successfully on inconsistency in mention of monitoring frequency of parameter "SOF" in the webhosted monitoring report from the registered PoA-DD and CPA-DD.</p>	CAR G4	OK
<p>c) Correctness (VVS, §§ 389-393)</p> <p><i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i></p> <p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness</i></p>	<p>/CPA-DD/ /PoADD/ /MR/ /AMS II.G./ /MM/</p>	<p><input checked="" type="checkbox"/> Correct <input type="checkbox"/> Not correct (initial assessment)</p> <p>Description: CPA # 01: 84 % CPA # 02: 84%</p> <p>have been derived from the usage survey, conducted in line with registered monitoring plan and applied methodology AMS II.G. version 05.</p> <p>Verifier's action: Value in the MR was cross checked from the</p>	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>of the approach used should be given. In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i>	/USR/ /USDA/ /IM/	Usage Survey Report, Usage Survey Data analysis sheet, applied methodology and registered MP were also checked. An interview with survey team, CME representatives, personnel involved in data monitoring and recording, consultant and ICS end users were taken to further assess the value arrived for this parameter. Conclusion: Value of this parameter presented in MR is found to be correct.		
G. Stove_{year}		Calculated average stove operation years in the monitoring period		
a) Measurement / Determination method (VVS, §§ 389-393) <i>Describe how the monitoring parameter was measured / determined. Focus primarily on the original data level (ODL) but also describe the applied data aggregation trails (from ODL to data aggregation level zero (DAL0)).</i> <i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i> <i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i>	/IM01/ /POADD/ /AMS II.G/ /MR/ /DATABASE/ SE/ /Ann-2/	Description: Stove _{year} is the time period for which an ICS deployed under PoA is under operation and is calculated based on date of installation of ICS and start date of crediting period of CPA as follows: If ICS Installation date is before Crediting period start date: Stove _{year} = (Crediting period end date - Crediting Period Start Date)/365 If ICS Installation date is after Crediting Period start date: Stove _{year} = (Crediting period end date - ICS Installation Date)/365 The values are determined at the end of the monitoring period. Verifier's action: PoA-Monitoring Distribution database ^{/DATABASE/} , ER calculation spread sheet ^{/Ann-2/} , registered monitoring plan and MR were checked. Conclusion: Measurement method of this parameter is found to be in accordance with the registered PoA-DD, CPA-DDs, applied methodology AMS II.G version 05.	OK	OK
b) Accuracy and QA/QC Procedure (VVS, §§ 394-400)	/CAL/ /MM/	Description: This parameter does not involve any calibration of equipment however CME ensures the competencies of		

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p> <p><i>Include calibration dates and information in validity of the installed monitoring equipment in the table in Annex 2.</i></p>	<p>/DATABASE/ SE/ /Ann-2/</p>	<p>personnel involved in the monitoring of this parameter by providing the training and verifying the records before entering into the master database.</p> <p>Verifier's action: PoA-DD, CPA-DD, MR, PoA Monitoring Distribution Data base, ER calculation spread sheet was checked.</p> <p>Conclusion: Measurement and calculation procedure of this parameter is found to be appropriate.</p>		
<p>c) Correctness (VVS, §§ 389-393)</p> <p><i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i></p> <p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>	<p>/MR/ /DATABASE/ SE/ /Ann-2/</p>	<p><input checked="" type="checkbox"/> Correct <input type="checkbox"/> Not correct (initial assessment)</p> <p>Description:</p> <p>CPA # 01: 1.08 CPA # 02: 0.22</p> <p>The values measured for this parameter are taken from Database for POA Monitoring and Distribution ^{/DATABASE/} which has the provision to adjust the calculation of stove year based on start date of ICS installation and start date of crediting period of the CPA.</p> <p>Verifier's action: Data base and ER calculation spread sheet is assessed with regards to calculation of stove year against the value provided in the MR.</p> <p>Conclusion: Values presented for this parameter is accurately calculated and correct.</p>	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
H. f_{old}		The fraction of end users that are still using baseline (replaced) stoves.		
<p>a) Measurement / Determination method (VVS, §§ 389-393)</p> <p><i>Describe how the monitoring parameter was measured / determined. Focus primarily on the original data level (ODL) but also describe the applied data aggregation trails (from ODL to data aggregation level zero (DALO)).</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	<p>/IM01/ /POADD/ /AMS II.G/ /ANN-3/ /ANN-4/</p>	<p>Description: The fraction of end users that are still using baseline stoves is measured through the survey of the sampled population in FWDR region where the CPA#1 and CPA#2 are implemented. As per the survey conducted during January-March 2015 CME has arrived to a value of 80% of the deployed stoves under CPAs. Sample was selected using multi stage sampling approach of cross CPAs (CPA01 and CPA02).</p> <p>Value for parameter is determined applying the Hansen Hurwitz estimator to account for multi-stage sampling approach. In case that the value does not meet 95/10 confidence precision level required for cross-CPA sampling, the lower bound of the confidence interval is conservatively applied.</p> <p>As 95/10-confidence precision estimate was not met, upper bound of confidence interval is conservatively applied in line with applied methodology.</p> <p>Verifier's action: PoA-DD, MR, Usage Survey Report^{/Ann-3/}, Usage Survey Analysis Data Analysis sheet^{/ANN-4/USDA/}, ER calculation spread sheet were assessed along with onsite visit interview with all relevant stakeholder's including ICS end users.</p> <p>Conclusion: Measurement method and frequency of this parameter is found to be in accordance with the registered PoA-DD, CPA-DDs, applied methodology AMS II.G version 05.</p>		
<p>b) Accuracy and QA/QC Procedure (VVS, §§ 394-400)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if</i></p>	<p>/CAL/ /MM/</p>	<p>Description: There is no equipment involved during usage survey, which requires calibration, by the CME/CPA implementer neither required by the registered monitoring plan.</p> <p>The usage survey took place from January to March 2015.</p> <p>ICS users were interviewed and there inputs were recorded in an application installed in mobile phones of surveyors which in</p>	CAR G5	

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p> <p><i>Include calibration dates and information in validity of the installed monitoring equipment in the table in Annex 2.</i></p>		<p>turn downloaded in the central data bases system once the survey questions are complete and all set of required information were correctly entered.</p> <p>Verifier's action: Registered monitoring plan, MR, applied methodology, usage survey report and analysis sheet were verified. Representative from Usage Survey team along with the CME/CPA implementer and consultant were also interviewed during the onsite visit.</p> <p>Conclusion: Measurement and calculation procedure and frequency of this parameter is found to be appropriate. Moreover CAR G5 was raised and closed successfully on inconsistency in mention of monitoring frequency of parameter "F_{old}" in the webhosted monitoring report from the registered PoA-DD and CPA-DD.</p>		
<p>c) Correctness (VVS, §§ 389-393)</p> <p><i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i></p> <p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>	/MR/	<p><input checked="" type="checkbox"/> Correct <input type="checkbox"/> Not correct (initial assessment)</p> <p>Description:</p> <p>CPA # 01: 80 % CPA # 02: 80%</p> <p>As per onsite observation and interview, it was found that less than 20 % of households have been using their old stove along with ICS, which is less than CME/PP value of 80%, and hence the user survey conducted by the CME can be concluded as conservative.</p> <p>Usage Survey Report^{/ANN-3/}, Usage survey analysis spread sheet^{/ANN-4/}, sample size selection spread sheet^{/ANN-9/} and sample size calculation spread sheet were assessed and found to be in line with the verified observation and Guideline for sampling and survey^{/G-SS/}.</p> <p>As per the survey analysis spread sheet^{/ANN-4/}, Usage Survey Report^{/ANN-3/} and Monitoring report, it was verified that the overall</p>		

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		<p>mean proportion calculated for fold is 0.679. However, this value did not meet required confidence/precision level of 95/10 required for cross-CPA sampling. Thus the CME has opted the more conservative value of the upper bound of the confidence interval of 0.796 (80%). This approach is found to be in accordance with the applied methodology AMS II.G version 05 and hence acceptable.</p> <p>Verifier's action: Value in the MR was cross checked from the Usage Survey Report, Usage Survey Data analysis sheet, applied methodology and registered MP were also checked.</p> <p>An interview with survey team, CME representatives, personnel involved in data monitoring and recording, consultant and ICS end users were taken to further assess the value arrived for this parameter. During onsite visit and inspection of ICS under the project, it was observed that this value depends on who is answering the question (user itself or representative of the family who does not cook/involve in). Fraction of end users that are still using the baseline stoves was found less than 20% out of total 67 households interviewed during verification site visit.</p> <p>Conclusion: Value of this parameter presented in MR is found to be correct and conservative.</p>		
I. $\eta_{\text{new},y}$		Efficiency of the device being deployed as part of the project activity in year y		
a) Measurement / Determination method (VVS, §§ 389-393) Describe how the monitoring parameter was measured / determined. Focus primarily on the original data level (ODL) but also describe the applied data aggregation trails (from ODL to data aggregation level zero	/IM01/ /POADD/ /AMS II.G / /ANN-6/	Description: The efficiency of the device being deployed is measured through the Water Boiling Test (WBT) as required by the applied methodology and registered monitoring plan. Water Boiling Tests (WBT) is conducted by Renewable Energy Test Station (RETS), Under Nepal Academy of Science & Technology, on 36 sampled ICS; model surveyed proportional to total number of each ICS model in population. Minimum sample required by the applied methodology and registered monitoring		

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<p>(DALO)).</p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>		<p>plan is 30 and hence taking 36 samples from the different district for WBT is found to be appropriate.</p> <p>CME has opted to conduct the monitoring of this parameter in Jan/Feb 29015 which is once every two years. The applied methodology states that if the efficiency of the ICS does not drop significantly as compared to the initial efficiency of the new device, over a time period of two years of typical usage, biennial monitoring is allowed. It was observed during the onsite inspection and interview with the users, CME, CPA implementer and manufacturer read with the Test reports^{/ANN-6/} of ICS models RS1.1, RS1.3, and RS3.1, that efficiency of the ICS does not drop significantly as compared to the initial efficiency of the new device, over a time period of two years of typical usage and hence biennial frequency of monitoring this parameter is acceptable.</p> <p>Furthermore, it was also observed that initial efficiency tested in the laboratory of different ICS type for the purpose of ex-ante ER calculation, has the lower value of 23.9% than the infield real term WBT assessment for thermal efficiency of 27.66% (weighted average of RS 1.1 and RS 1.3). Verification team based on interview with the CRT/N, CME and end users and personal sectoral expertise along with the efficiency test reports of different stove models can conclude that procedure to calculate weighted average of thermal efficiency and application of same for ER calculation is correct in the MR and ER calculation spreadsheet.</p> <p>Verifier's action: PoA-DD, MR, WBT Reports^{/ANN-6/}, WBT Data Analysis sheet^{/ANN-7/}, ER calculation spread sheet^{/ANN-2/} were assessed along with onsite visit interview with all relevant stakeholder's including ICS end users. Since the thermal efficiency conducted at the time of validation in the laboratory is</p>		

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		<p>lower than the WBT result in the field, VT has confer the WBT protocol version 4.2.2^{6/WBT-PRT/} which states that laboratory test results may vary from the test of ICS in practice in the field as several factors govern the result of the WBT results including, types of fuel used, moisture content, shape and size of the solid fuel (fire wood), initial water temp and cooking pot etc.</p> <p>Initial test were conducted in laboratory by CRT/N on single ICS of each ICS type (RS 1.1, 1.3 or RS 3.1) however the RETS a third party government agency conducted WBT on appropriate ICS sample size (36) in line with requirements of applied methodology AMS II.G, which can be considered most reliable representative of entire population.</p> <p>Based on this, verification team can accept the thermal efficiency value applied for current monitoring period.</p> <p>Conclusion: Measurement method of this parameter is found to be in accordance with the registered PoA-DD, CPA-DDs, applied methodology AMS II.G version 05.</p>		
<p>b) Accuracy and QA/QC Procedure (VVS, §§ 394-400)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC</i></p>	<p>/CAL/ /MM/ /AMS II.G/ /TECH/ /ANN- 6/ / ANN 7/ /WBT- PRT/</p>	<p>Description: RETS has conducted the Water Boiling Test to measure the thermal efficiency of the ICS based on requirement laid down in the registered monitoring plan and applied methodology. 36 samples were tested during the WBT and an weighted average thermal efficiency of 27.66% is applied for the purpose of calculation of emission reduction. Model surveyed proportional to total number of each ICS model in population. Thermal efficiencies of 3 stove models of ICS under the CPA1 and CPA2 as per the technical specification^{/TECH/} are as follows:</p> <p>RS 1.1: 29.53 % RS 1.3: 26.69%</p>	OK	OK

⁶ <http://cleancookstoves.org/technology-and-fuels/testing/protocols.html>

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p> <p><i>Include calibration dates and information in validity of the installed monitoring equipment in the table in Annex 2.</i></p>		<p>RS 3.1: 28.50%</p> <p>Sampling was conducted considering all three models (RS1.1, RS 1.3 and RS 3.1). Since RS3.1 stoves are replaced by RS1.3 models, and also are not credited during this monitoring period to be conservative. Therefore the efficiency as calculated using a weighted average of efficiencies of RS1.3 and RS1.1, based on credited population of stoves excluding RS 3.1 under this monitoring period. This is conservative as the efficiency of the RS3.1 model is higher than RS 1.3. The weighted average value of the efficiency used for ER calculation is 27.66%, which is in conformity with the specification.</p> <p>WBT Data Analysis sheet as Annex 7 for calculation approach has been presented.</p> <p>Sampling and survey were carried out with 95% confidence interval and a 10% margin of error for cross-CPA sampling. Verifier's action: PoA-DD, MR, ER calculation spreadsheet, WBT report by RETS^{/Ann- 6/}, WBT data analysis sheet^{/Ann- 7/}, were verified.</p> <p>Conclusion: Measurement and calculation procedure of this parameter is found to be appropriate and inline with the registered monitoring plan and applied methodology, AMS II.G. version 05.</p>		
<p>c) Correctness (VVS, §§ 389-393)</p> <p><i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i></p> <p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP</i></p>	<p>/MR/ /AMS II.G/ /TECH/ /Ann- 6/ /Ann-7/</p>	<p><input checked="" type="checkbox"/> Correct <input type="checkbox"/> Not correct (initial assessment)</p> <p>Description: CPA # 01: 27.66 % CPA # 02: 27.66%</p> <p>An analysis sheet for WBT data^{/Ann- 7/} also provided along which further provides the transparency in calculation approach.</p> <p>Verifier's action: WBT Report^{/Ann- 6/}, WBT data analysis sheet^{/Ann-}</p>		

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>		<p>7, MR and emission reduction calculation spread sheet were assessed.</p> <p>Conclusion: The efficiency as calculated using a weighted average of efficiencies of RS1.3 and RS1.1, based on credited population of stoves. This is conservative as the efficiency of the RS3.1 model is higher. The weighted average value of the efficiency used for ER calculation is 27.66%, which is in conformity with the specification. RETS WBT report considered all three efficiencies for 3 ICS model being credited in CPA1 and CPA2.</p> <p>The values of this parameter presented in MR are found to be correct and conservative.</p>		

Appendix 6. Calibration dates and validity of installed monitoring equipment

Table A-6: Periodic Verification Checklist – Calibration details

Monitoring equipment	Related monitoring parameter as per applicable registered monitoring plan	Serial number	Type	Accuracy or accuracy class	Previous calibration (last calibration before start of this monitoring period)	Calibration date(s) during this monitoring period	Validity of calibration(s)	Delay in calibration: yes/no	Period of delayed calibration
								<input type="checkbox"/> No <input type="checkbox"/> Yes	From: To:
								<input type="checkbox"/> No <input type="checkbox"/> Yes	From: To: