




**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**

<b>Title of the programme of activities (PoA)</b>	MicroEnergy Credits - Microfinance for Clean Energy Product Lines - Mongolia	
<b>UNFCCC reference number of the PoA</b>	UNFCCC ID: 8142 TN P-No.: 8000465065 – 16/132	
<b>Version number(s) of the PoA-DD(s) applicable to this report</b>	2.2	
<b>Version number of the verification and certification report</b>	1.1	
<b>Completion date of the verification and certification report</b>	22/02/2017	
<b>Monitoring period number</b>	2	
<b>Duration of this monitoring period</b>	01/05/2014 - 30/04/2016 (First and last days included)	
<b>Number and version number of the monitoring report to which this report applies</b>	3	
<b>Coordinating/managing entity (CME)</b>	MicroEnergy Credits	
<b>Host Party(ies)</b>	Host Party(ies) of the PoA	Is this a host Party to a CPA covered in this report? (yes/no)
	Mongolia	Yes
<b>Sectoral scope(s)</b>	Scope 3: Energy demand	
<b>Selected methodology(ies)</b>	AMS-II.E: Energy efficiency and fuel switching measures for buildings, Version 10	
<b>Selected standardized baseline(s)</b>	N/A	

Total estimated GHG emission reductions or net GHG removals for this monitoring period in the included CPA(s) covered in this report	<table border="1"> <tr> <td data-bbox="611 241 981 315">CPA under verification</td> <td colspan="4" data-bbox="981 241 1382 315">Value estimated in ex ante calculation</td> </tr> <tr> <td data-bbox="611 315 981 367">8142-0001</td> <td colspan="4" data-bbox="981 315 1382 367">84,022<sup>1</sup></td> </tr> </table>					CPA under verification	Value estimated in ex ante calculation				8142-0001	84,022 <sup>1</sup>							
	CPA under verification	Value estimated in ex ante calculation																	
8142-0001	84,022 <sup>1</sup>																		
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 data-bbox="611 450 858 555" rowspan="2">Project Activity</th> <th colspan="4" data-bbox="858 450 1382 501">ER<sub>y</sub> (tCO<sub>2</sub>e)</th> </tr> <tr> <th data-bbox="858 501 981 555">2014</th> <th data-bbox="981 501 1104 555">2015</th> <th data-bbox="1104 501 1227 555">2016</th> <th data-bbox="1227 501 1382 555">Total</th> </tr> <tr> <td data-bbox="611 555 858 622">CPA # 0001</td> <td data-bbox="858 555 981 622">24,184</td> <td data-bbox="981 555 1104 622">42,182</td> <td data-bbox="1104 555 1227 622">18,354</td> <td data-bbox="1227 555 1382 622">84,720</td> </tr> </table>					Project Activity	ER <sub>y</sub> (tCO <sub>2</sub> e)				2014	2015	2016	Total	CPA # 0001	24,184	42,182	18,354	84,720
	Project Activity	ER <sub>y</sub> (tCO <sub>2</sub> e)																	
		2014	2015	2016	Total														
CPA # 0001	24,184	42,182	18,354	84,720															
Name of DOE	TÜV NORD CERT GmbH																		
Name, position and signature of the approver of the verification and certification report	 Rainer Winter Final Approver																		

<sup>1</sup> These are value as stated in the section B.5.3 of the registered CPA-DD for CPA-0001. Annual value stated in CPA-DD for one year is 42,011 tCO<sub>2</sub>e (only for heating & cooking technology, i.e. stoves). Thus for two years the total value comes out to be 84,022 tCO<sub>2</sub>e

**SECTION A. Executive summary**

MicroEnergy Credits (MEC), has commissioned the TÜV NORD JI/CDM Certification Program to carry out the 2<sup>nd</sup> periodic verification of the CDM Programme of Activities (CDM-PoA):

**“MicroEnergy Credits - Microfinance for Clean Energy Product Lines - Mongolia”**

with regard to the relevant requirements for CDM PoAs.

This verification covers the period from 01/05/2014 to 30/04/2016 (including both days).

The project activity is intended to replace:

- inefficient stoves for heating and cooking
- inefficient Ger insulation

by installing and maintaining energy efficient products at household level.

The replacements are expected to reduce the consumption of fuel required to keep the house at a habitable temperature during heating season and subsequently reduce GHG emissions during combustion.

The technologies adopted in the CPA-0001 are identical to the technology defined in PoA-DD, i.e. install and maintain the energy efficient products (CEPs) at household level and then replace

- inefficient stoves for heating and cooking
- inefficient ger insulation

The installation date of a CEP, when a XacBank representative visits the household and confirms installation of the product, is the start of crediting for each individual CEP.

Stoves are credited according to the dwelling type in which they are located, either a house or a ger. Ger blankets are included in the CPA for future crediting periods but are not credited during current Issuance.

**Summary Installations of CEPs**

Installation Month-Year	Stove-House*	Stove-Ger*	Ger Blanket	Total CEPs
Heating Season 2014-15	4,498	14,140	1,270	19,908
Heating Season 2015-16	4,465	14,173	1,270	19,908

\*Stoves with unknown dwelling type are conservatively considered to be located in dwelling type with lower ER for that particular heating season, hence there is small variation in stove numbers in different dwelling types

The starting date of the project activity is 26/01/2012, as stated in the registered CPA-DD. However the first CEP included in the project activity was installed on 03/05/2013).<sup>2</sup> The CPA considers only the fuel savings in heating season, the 2<sup>nd</sup> monitoring period of CPA-0001 is started from 2014-05-01 and covers the heating season in Year 2014-2016, which is ended on 2016-04-30 (both days included).

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

**Table A-1:** Project Location

CPA No.: 001	Project Location	
Host Country	Mongolia	
Province	Ulaanbaatar	
City	Ulaanbaatar city	
Focal point	Latitude	Longitude
Ulaanbaatar	47.92 <sup>0</sup> N	106.92 <sup>0</sup> E

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

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

Key project technology/installation is given in Table -:

**Table-3:** Technical data of the project activity

Project activity	Unit	Type
Stove	-	<ul style="list-style-type: none"> <li>- Silver Stove Mini (model 131)</li> <li>- Silver Stove Turbo (model 126)</li> <li>- Royal Stove Dul model (Royal Single model)</li> <li>- Royal Stove Golomt model (Royal Double model)</li> </ul>
Ger blanket	-	<ul style="list-style-type: none"> <li>- 4-walled model</li> <li>- 5-walled model</li> </ul> <p>double layer inside and a waterproof layer outside Six sections, including a special door covering and a section that covers the base of the ger on the outside</p>

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 Component project activity design document.
- the monitoring plan is in accordance with the applied approved CDM methodology, i.e., AMS II.E. ver. 10
- 
- the monitoring system is in place and functional. The project has generated GHG emission reductions.

As the result of the 2<sup>nd</sup> periodic verification, the verifier confirms that the GHG emission reductions are calculated without material misstatements in a conservative and appropriate

<sup>2</sup> In this monitoring period, only efficient cooking and heating stoves are credited. Ger blankets are conservatively not credited, though they are included in the CPAs and may be credited in future monitoring periods. This is due to the current inability to accurately track product overlap in households, which is necessary to take cross-effects of the technologies into account.

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: **84,720 tCO<sub>2</sub>e**

## 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	EI	Lubanga	David	-
2.	Technical reviewer	IR	Winter	Stefan	TÜV NORD CERT
3.	Approver	IR	Winter	Rainer	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-0001 verification were reviewed. The main documents are listed below:

- the latest version of the PoA-DD including the monitoring plan<sup>/PoA-DD/</sup>,
- the last revision of the CPA-DD<sup>/CPA-DD/</sup>,
- the last revision of the CPA validation report<sup>/VAL/</sup>,
- documentation of validation which are relevant during verification<sup>/VAL/</sup>
- the emission reduction calculation spreadsheet<sup>/XLS/</sup>
- previous verification report (MPI)<sup>/VER/</sup>.

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: 03/10/2016 to 05/10/2016				
No.	Activity performed on-site	Site location	Date	Team member
1.	<ul style="list-style-type: none"> <li>Formal Introduction with CME, CPA implementer and other involved personnel in GHG data monitoring, discussion on audit planning, site lay out.</li> <li>Record keeping.</li> <li>Sales receipt verification</li> <li>Double counting avoidance procedure</li> <li>Interviews of the CME, PO and sales personnel</li> <li>Master data verification</li> <li>Competency of the PO and involved personnel.</li> <li>Overall organizational structure for data management and flow of information</li> <li>Meeting and interview with third party survey agency on procedure adopted for sampling and survey</li> </ul>	Ulaanbaatar Region of Mongolia (Xac Bank office)	03/10/2016	Prakash Kumar Mishra, CME (MEC) representative, CPA implementer (Xac-Bank), involved personnel and others
2	Onsite verification of deployed stoves, interview with the ICS users on related issues, e.g. usage pattern, fuel saving, awareness level, maintenance procedure fuel consumption etc.	Ulaanbaatar Region of Mongolia (Xac Bank office)	03/10/2016	Prakash Kumar Mishra
3	Onsite verification of deployed stoves/gers, interview with the users on related issues, e.g. usage pattern, fuel saving, awareness level, maintenance procedure fuel consumption etc.	Ulaanbaatar Region of Mongolia (Xac Bank office)	04/10/2016	Prakash Kumar Mishra/CME/PP
3	Onsite verification of deployed stoves/gers, interview with the users on related issues, e.g. usage pattern, fuel saving, awareness level, maintenance procedure fuel consumption etc.	Ulaanbaatar Region of Mongolia (Xac Bank office)	04/10/2016	Prakash Kumar Mishra/CME/PP
4	<ul style="list-style-type: none"> <li>Discussion on Monitoring reports compliance with MR filling guideline, PoA DD, CPA DDs, Validation report</li> <li>Documentary evidence check, data verification and comparison with onsite observation</li> </ul>	Ulaanbaatar Region of Mongolia (Xac Bank office)	05/10/2016	Prakash Kumar Mishra/CME/PP/Consultant

**C.3. Interviews**

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Blanchfield	Audra	MEC	03/10/2016	Program overview and Organisational structure, implementation status, Sales and credit tracker	PKM

No .	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
					database management	
2	Subramanian	Sriskandh	MEC	03/10/2016	Program overview and Organisational structure, implementation status, Sales and credit tracker database management, Development of MR and related documentation for CPA01 verification	PKM
3	Munkhbat	Batulga	XAcBank	03/10/2016	CPA implementation overview, Procedure and mechanism followed during usage survey	PKM
4	-	Oyungeral	XacBank	03/10/2016	Procedure and mechanism followed during usage survey, QA/QC followed during survey	PKM
05	MISHKA	BAASANHÜÜ	CEP users	03/10/2016	CEP Information and usage	PKM
06	BYAMBASÜREN	NYAMBAZAR	CEP users	04/10/2016	CEP Information and usage	PKM
07	SÜNREVTSOODOL	DASHAA	CEP users	04/10/2016	CEP Information and usage	PKM
08	DAMDINJAV	ULZIIBAYAR	CEP users	04/10/2016	CEP Information and usage	PKM
09	LKHAMSUREN	BURMAA	CEP users	04/10/2016	CEP Information and usage	PKM
10	TUUL	JADAMBAA	CEP users	04/10/2016	CEP Information and usage	PKM
11	KHAJID	ENKHEE	CEP users	04/10/2016	CEP Information and usage	PKM
12	YONDONJAMTS	HROE	CEP users	04/10/2016	CEP Information and usage	PKM
13	NYAMDELEG	DAVAASUREN	CEP users	04/10/2016	CEP	PKM

No .	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
					Information and usage	
14	URTNASAN	ENKHSARUUL	CEP users	04/10/2016	CEP Information and usage	PKM
15	ALTANGEREL	ODERDENE	CEP users	04/10/2016	CEP Information and usage	PKM
16	KHISHIGT	NASANBAT	CEP users	04/10/2016	CEP Information and usage	PKM
17	PALAMJAV	RINA	CEP users	04/10/2016	CEP Information and usage	PKM
18	ENKHEE	BATBAYAR	CEP users	04/10/2016	CEP Information and usage	PKM
19	DAMDINSUREN	BAIGALISÜREN	CEP users	04/10/2016	CEP Information and usage	PKM
20	TSERENKHAND	BATSAIKHAN	CEP users	04/10/2016	CEP Information and usage	PKM
21	ADYA	NOROVSAMBU U	CEP users	04/10/2016	CEP Information and usage	PKM
22	KHALTARKHÜÜ	SARANGEREL	CEP users	04/10/2016	CEP Information and usage	PKM
23	LAMJAV	BATHUYAG	CEP users	04/10/2016	CEP Information and usage	PKM
24	GOMBOJAV	GANBAYAR	CEP users	04/10/2016	CEP Information and usage	PKM
25	GANCHIMEG	DAVAA	CEP users	04/10/2016	CEP Information and usage	PKM
26	DOLGOR	ANKHTUYAA	CEP users	04/10/2016	CEP Information and usage	PKM
27	TSERENDOLGO R	TUMENBAYAR	CEP users	04/10/2016	CEP Information and usage	PKM
28	NYAMAA	MYAGMARSUR EN	CEP users	04/10/2016	CEP Information and usage	PKM
29	SOSORBURAM	VANCHIG	CEP users	04/10/2016	CEP Information and usage	PKM
30	GAN	OCHIR	CEP users	04/10/2016	CEP Information and usage	PKM
31	TSOGTBAATAR	TSENDEEJAV	CEP users	04/10/2016	CEP Information and usage	PKM
32	BAYASGALANTO GTOKH	JAMBAL	CEP users	04/10/2016	CEP Information and usage	PKM



No	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
33	BATDELGER	TSEVEENDORJ	CEP users	04/10/2016	CEP Information and usage	PKM
34	MILAA	STENGE	CEP users	04/10/2016	CEP Information and usage	PKM
35	OVGONKHUU	BDAAVE	CEP users	04/10/2016	CEP Information and usage	PKM
36	ADIYAACHIMEG	PURVEE	CEP users	04/10/2016	CEP Information and usage	PKM
37	RNBIW	TSERENDAVG A	CEP users	04/10/2016	CEP Information and usage	PKM
38	FITIS	SENGE	CEP users	04/10/2016	CEP Information and usage	PKM
39	BAZARRAGCHA A	BUDRA	CEP users	04/10/2016	CEP Information and usage	PKM
40	ERDENEBAT	BURAADAI	CEP users	04/10/2016	CEP Information and usage	PKM
41	TUVSHINZAYAA	NYAMTSEREN	CEP users	04/10/2016	CEP Information and usage	PKM
42	TUMURCHUDUR	DAVAASUREN	CEP users	05/10/2016	CEP Information and usage	PKM
43	GEGEENBADRAL	BATSUREN	CEP users	05/10/2016	CEP Information and usage	PKM
44	BOLOREDENE	BALJINNYAM	CEP users	05/10/2016	CEP Information and usage	PKM
45	MYAGMARSUREN	ERDENETSOGT	CEP users	05/10/2016	CEP Information and usage	PKM
46	ERDENEBAVAR	BAYARMAGNAI	CEP users	05/10/2016	CEP Information and usage	PKM
47	GANTUYA	TSEGMIDIIN	CEP users	05/10/2016	CEP Information and usage	PKM
48	ULZIIBAT	DASHNYAM	CEP users	05/10/2016	CEP Information and usage	PKM
49	ODONCHIMEG	LUTAA	CEP users	05/10/2016	CEP Information and usage	PKM
50	LUVSANJAMTS	ZAGDBAZAR	CEP users	05/10/2016	CEP Information and usage	PKM
51	ERDENEBAVAR	BAYARMAGNAI	CEP users	05/10/2016	CEP Information and usage	PKM
52	GANTUYA	TSEGMIDIIN	CEP users	05/10/2016	CEP Information	PKM

No	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
					and usage	
53	ULZIIBAT	DASHNYAM	CEP users	05/10/2016	CEP Information and usage	PKM
54	ODONCHIMEG	LUTAA	CEP users	05/10/2016	CEP Information and usage	PKM
55	LUVSANJAMTS	ZAGDBAZAR	CEP users	05/10/2016	CEP Information and usage	PKM
56	ANKHBAYAR	BUYANTOGTO KH	CEP users	05/10/2016	CEP Information and usage	PKM
57	GOMBOSUREN	DASHPUNTSAG	CEP users	05/10/2016	CEP Information and usage	PKM
58	DULAMSUREN	HDEAD	CEP users	05/10/2016	CEP Information and usage	PKM
59	ERDENE OCHIR	TSERENDEJID	CEP users	05/10/2016	CEP Information and usage	PKM
60	AUYSH	BAYAR	CEP users	05/10/2016	CEP Information and usage	PKM
61	NADIA	DASHZEVEG	CEP users	05/10/2016	CEP Information and usage	PKM
62	HROE	YONDONJAMTS	CEP users	05/10/2016	CEP Information and usage	PKM
63	DAVAASUREN	NYAMDELEG	CEP users	05/10/2016	CEP Information and usage	PKM
64	MIGDORJ	TOM	CEP users	05/10/2016	CEP Information and usage	PKM
65	YESÖNJARGAL	LODOIDAMBA	CEP users	05/10/2016	CEP Information and usage	PKM
66	SERJMYADAG	OIDOV	CEP users	05/10/2016	CEP Information and usage	PKM
67	SERMEDDAMBA	DÜGERJAV	CEP users	05/10/2016	CEP Information and usage	PKM

#### 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 <sup>1)</sup>	Sampling Type <sup>2)</sup>	Total Population	Sample Size by PP
	POF	SRS	PS	18,638	Heating Season

			2014/15 – 212 Heating Season 2015/16 - 244
$C_{y,new,CEP-i}$	SRS	PS	Heating Season 2014/15 – 204 Heating Season 2015/16 - 235
$C_{y,old,CEPi}$	SRS	PS	Heating Season 2014/15 – 204 Heating Season 2015/16 - 235

<sup>1)</sup> Sampling Approaches:

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

<sup>2)</sup> Sampling Types:

PS: Parameter Sampling

Simple random sampling method has been applied to determine the samples for the monitored parameters (POF,  $C_{y,new,CEP-i}$ ). Randomization was done using random function on Microsoft excel. The monitoring parameter,  $N_{all}$  is monitored 100% and continuously through the online credit tracker platform and the monitoring parameter  $C_{y,old,CEPi}$  is calculated applying regression analysis as approved at PoA validation and procedure for calculation of the same is fixed. The procedure for regression calculation and the result of the parameter is found to be appropriately calculated and in line with onsite observation and interview with end users.

A 3<sup>rd</sup> party survey report document<sup>/HES/</sup> has been referenced for the design of the sampling procedure, random selection of sample and the surveys done to determine the value of the monitored parameters. This has been verified and found to be appropriate.

According to the applied methodology (AMS.II.E. version 10), registered PoA-DD and CPA-DD, the project proponent is required to measure/monitor the parameters POF,  $C_{y,new,CEP-I}$  and  $C_{y,old,CEPi}$  at least every 2 years, however PP has decided to conduct monitoring surveys and monitor these parameters on an annual basis and accordingly sample size has been determined by satisfying a 90/10 precision (90% confidence interval and 10% margin of error). This approach is deemed to be conservative.

The sample size for the monitored parameters, POF,  $C_{y,new,CEP-I}$  and  $C_{y,old,CEPi}$  has been determined by following the relevant requirements for sampling laid down in "Guidelines for sampling and survey for CDM project activities and CDM PoAs".

The dwelling type is decisive for project and baseline coal consumption and hence both dwelling types i.e. ger and stoves are included in this CPA and sampling has been done for both dwelling types. Stoves with unknown dwelling type are conservatively considered to be located in dwelling type with lower ER for that particular heating season, hence there is small variation in stove numbers in different dwelling types. To ensure accuracy of results, the total samples determined through simple random sampling on the total population has been further split into districts – Bayangol, Songinokhairkhan and other. Further, considering possible low response rate and households response bias into account, oversampling has been applied. The sample size that has been taken for year 2014-2015 is 212 and for year 2015-16 is 244 based on which corresponding emission reduction are conservatively claimed.

According to survey<sup>/HES/</sup>, and as mentioned above, monitoring surveys have been carried out in six dwelling district combinations or farms namely:

- Frame 1: Stove in house dwelling type, located in Songinokhairkhan district
- Frame 2: Stove in house dwelling type, located in Bayangol district
- Frame 3: Stove in house dwelling type, located in other district
- Frame 4: Stove in ger dwelling type, located in Songinokhairkhan district
- Frame 5: Stove in ger dwelling type, located in Bayangol district
- Frame 6: Stove in ger dwelling type, located in other district

The split of samples into these frames is as follows –

Heating Season 2014/2015 – Total samples - 212

Dwelling ->	GER			HOUSE		
District - >	Bayangol	Songinokhairkhan	Other	Bayangol	Songinokhairkhan	Other
Frame						
1					36	
2				35		
3						34
4		36				
5	35					
6			36			

Heating Season 2015/2016 – Total samples - 244

Dwelling ->	GER			HOUSE		
District - >	Bayangol	Songinokhairkhan	Other	Bayangol	Songinokhairkhan	Other
Frame						
1					38	
2				42		
3						45
4		48				
5	32					
6			39			

Out of total 18,638 ( $N_{all}$ ) efficient heating products under CPA-0001, 4,465 have been deployed in the house hold and 14,173 in ger. CME has selected sample of 456 is in coherence with Guidelines for Sampling and Surveys for CDM Project Activities and Programme Activities” (Version 04.0) and “Standard for Sampling and Surveys for CDM Project Activities and Programme Activities” (version 5)<sup>/G-SS/</sup>. A sample size calculation spread sheet<sup>/SSCAL/Annex-10/</sup> is submitted by PP which is assessed to be appropriately provided with the sample size calculation procedure in accordance with Guidelines for Sampling and Surveys for CDM Project Activities and Programme Activities” (Version 04.0). Verification team has assessed these spreadsheets with the registered sampling plan in the PoA-DD, applied methodology AMS-II.E, version 10, and the “*Standard for Sampling and Surveys for CDM Project Activities and Programme Activities*” (version 05.0). Based on that verification team can conclude that sampling and survey conducted by the PP is reasonable and appropriate.

## Reliability

As far as calculations for reliability (Confidence/precisions) are concerned, CME has adopted a transparent and traceable approach in accordance with Appendix 4. “Best-practice examples for reliability calculations”; Annex-6 of EB 67 (Guidelines for Sampling and Surveys for CDM Project Activities and Programme Activities” (Version 04.0).

Reliability has been demonstrated separately for mean and proportion based parameter i.e. “ $C_{y,new\ CEPI}$ ” – project coal consumption,  $C_{y,old,CEPI}$  Baseline coal consumption and “POF”- Product Operation Fraction respectively.

For mean based reliability test, CME has calculated the mean value of the parameter, standard deviation, standard error, and precision as per Section 4 of “Best-practice examples for reliability calculations”. For proportion based reliability test, CME has calculated Standard Error and precision as per Section 5 of “Best-practice examples for reliability calculations”.

Reliability calculations at the total sample size level and also at the level of the dwelling district combination. Precision meets the 10% requirement in both cases for both the Heating seasons.

VT has assess the **ANNEX 1** - ER Calculations & HES-2014-15 and **ANNEX 2** - ER Calculations & HES-2015-16 in this regard and found the calculation/demonstration as appropriate.

A summary of the HES sampling results are shown in C.4.2 below. The application of the sampled parameters in calculating emissions reductions is demonstrated in Section E.1. As demonstrated below, each of the parameters met required confidence/precision for both sampling frames.

### POF Survey results for heating season 2014-15

Crediting Category	N	POF	Std Err	90% Confidence Level: Precision Achieved	Meets 90/10 Rule?
House-Song.	36	94%	0.04	6.65%	Yes
House-Bayan.	35	97%	0.03	4.77%	Yes
House-Other	34	94%	0.04	7.05%	Yes
Ger-Song.	36	97%	0.03	4.63%	Yes
Ger-Bayan.	35	97%	0.03	4.77%	Yes
Ger-Other	36	97%	0.03	4.63%	Yes

### POF Survey results for heating season 2015-16

Crediting Category	N	POF	Std Err	90% Confidence Level: Precision Achieved	Meets 90/10 Rule?
House-Song.	38	95%	0.04	6.29%	Yes
House-Bayan.	42	98%	0.02	3.96%	Yes
House-Other	45	98%	0.02	3.70%	Yes
Ger-Song.	48	96%	0.03	4.95%	Yes

Ger-Bayan.	32	97%	0.03	5.22%	Yes
Ger-Other	39	95%	0.04	6.12%	Yes

**C<sub>y,new,CEPi</sub> Survey results for heating season 2014-15**

Crediting Category	N	Mean (tons coal/HH/ heating season)	Standard Deviation	90% Confidence Level: Precision Achieved	Meets 90/10 Rule?
House-Song.	34	3.36	0.57	4.82%	Yes
House-Bayan.	34	3.26	0.51	4.40%	Yes
House-Other	32	3.31	0.73	6.40%	Yes
Ger-Song.	35	3.07	0.73	6.62%	Yes
Ger-Bayan.	34	2.78	0.48	4.83%	Yes
Ger-Other	35	2.92	0.73	6.93%	Yes

**C<sub>y,new,CEPi</sub> Survey results for heating season 2015-16**

Crediting Category	N	Mean (tons coal/HH/ heating season)	Standard Deviation	90% Confidence Level: Precision Achieved	Meets 90/10 Rule?
House-Song.	36	3.77	1.22	8.87%	Yes
House-Bayan.	41	3.23	0.66	5.25%	Yes
House-Other	44	3.50	0.86	6.08%	Yes
Ger-Song.	46	3.31	0.75	5.47%	Yes
Ger-Bayan.	31	3.33	0.48	4.29%	Yes
Ger-Other	37	3.18	0.70	5.93%	Yes

Complete details of the HES survey, data analysis, and results can be found in **ANNEX 1 - ER Calculations & HES-2014-15** & **Annex 2 - ER Calculations & HES-2015-16**.

Further, CME has carried out reliability calculations at the total sample size level and also at the level of the dwelling district combination. It is verified that the precision is meeting the 10% requirement in both cases for both the heating seasons.

**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 <sup>1)</sup>	Sampling Type <sup>2)</sup>	Sample survey Population by PP	Sample survey by VT
	POF	SiRS	AS	456	63
	C <sub>y,new,CEP-i</sub>	SiRS	AS	456	63
	C <sub>y,old,CEP-i</sub>	SiRS	AS	456	63

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.

The sampling approach is conducted according with “*Guidelines for Sampling and Surveys for CDM Project Activities and Programme Activities* (version 04.0)” and the “*Standard for Sampling and Surveys for CDM Project Activities and Programme Activities* (version 05.0). 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 less than 1% of small scale CDM thresholds which is appropriately demonstrated in emission reduction calculation spread sheet and in line with the “Assessment of debundling for small-scale project activities, version 04<sup>MT/</sup>”, the verification team decided to draw samples mainly from the project samples selected by PP. i.e. the acceptance sampling approach has been applied.

Guidelines for sampling and survey for small-scale CDM project activities has been applied. 63 samples in total have been randomly selected by verification team taking the possible low response rate into account.

AQL 0.5%, UQL 15%, producer risk 5% and consumer risk 5% have been adopted as per standard for sampling and survey for CDM project activities and programme of the activities. The values for AQL/UQL/producer risk and consumer risk have been taken by applying professional judgement and also considering experiences from the previous verification audit of this CPA. These considerations were made to select samples separately for both heating seasons. From each heating seasons, verification team has selected more than 25 samples (33 from hating season 1 and 30 from heating season 2) in order to assess the appropriateness of the sampling and survey result by the PP. No discrepancies were found during the verification site-visit.

**Table 5-2: Applied sampling standard**

AQL	0.5%
UQL	15%
Producer risk	5%
Consumer risk	10%
Sample size	25
Acceptance Number	1

### 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
<b>General</b>			
Compliance of the monitoring report with the	0	2	0

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
monitoring report form			
Remaining forward action requests from validation and/or previous verification	0	0	0
Specific-case CPA(s) considered for verification and covered in this report	1	1	0
<b>Programme of activities</b>			
Compliance of the programme implementation with the registered PoA-DD	0	0	0
Implementation and operation of the management system	1	0	0
Post-registration changes			
<ul style="list-style-type: none"> <li>Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline</li> </ul>	0	0	0
<ul style="list-style-type: none"> <li>Corrections</li> </ul>	0	0	0
<ul style="list-style-type: none"> <li>Inclusion of a monitoring plan in a registered PoA-DD (including its generic CPA-DD(s))</li> </ul>	0	0	0
<ul style="list-style-type: none"> <li>Permanent changes to the monitoring plan as described in the registered PoA-DD, applied methodology, or applied standardized baseline</li> </ul>	0	0	0
<ul style="list-style-type: none"> <li>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</li> </ul>	0	0	0
<ul style="list-style-type: none"> <li>Types of changes specific to afforestation and reforestation activities</li> </ul>	0	0	0
<b>Component project activity(ies)</b>			
Compliance of the CPA implementation with the included CPA design document	0	0	0
Post-registration changes			
<ul style="list-style-type: none"> <li>Temporary deviations from registered monitoring plan, applied methodology or applied standardized baseline</li> </ul>	1	0	0
<ul style="list-style-type: none"> <li>Corrections</li> </ul>	0	0	0
<ul style="list-style-type: none"> <li>Changes to the start date of the crediting period</li> </ul>	0	0	0
<ul style="list-style-type: none"> <li>Inclusion of a monitoring plan to an included CPA-DD</li> </ul>	0	0	0
<ul style="list-style-type: none"> <li>Permanent changes to the monitoring plan as described in the included CPA-DD, applied methodology, or applied standardized baseline</li> </ul>	0	0	0
<ul style="list-style-type: none"> <li>Changes to the programme design of the included CPA-DD</li> </ul>	0	0	0
<ul style="list-style-type: none"> <li>Types of changes specific to afforestation and reforestation component project activities</li> </ul>	0	0	0
Compliance of the monitoring plan with the monitoring methodology including applicable tool and standardized baseline	0	0	0
Compliance of monitoring activities with the registered monitoring plan	0	0	0
<ul style="list-style-type: none"> <li>Data and parameters fixed ex ante or at renewal of crediting period</li> </ul>	0	0	0
<ul style="list-style-type: none"> <li>Data and parameters monitored</li> </ul>	0	5	0
<ul style="list-style-type: none"> <li>Implementation of sampling plan</li> </ul>	0	0	0
Compliance with the calibration frequency requirements for measuring instruments	0	0	0
Assessment of data and calculation of emission			



Areas of verification findings	No. of CL	No. of CAR	No. of FAR
reductions or net removals			
• Calculation of baseline GHG emissions or baseline net GHG removals by sinks	0	0	0
• Calculation of project GHG emissions or actual net GHG removals by sinks	0	2	0
• Calculation of leakage GHG emissions	0	0	0
• Summary of calculation of GHG emission reductions or net GHG removals by sinks	0	0	0
• Comparison of actual GHG emission reductions or net GHG removals by sinks with estimates in included specific-case CPA	0	0	0
• Remarks on difference from estimated value in registered PDD	0	0	0
Others (please specify)	0	0	0
<b>Total</b>	<b>3</b>	<b>10</b>	<b>0</b>

#### 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**

MicroEnergy Credits (MEC), has commissioned the TÜV NORD JI/CDM Certification Program to carry out the 2<sup>nd</sup> periodic verification of the CDM PoA:

**“MicroEnergy Credits -- Microfinance for Clean Energy Product Lines - Mongolia”,**

The project reduces GHG emissions due to: i) the using of inefficient stove for heating and cooking and ii) the inefficient Ger insulation, by installing and maintaining energy efficient products at household level. Although efficient Ger are deployed under this CPA, however, ERs accrued by them are not being claimed by PP for this verification period. The same was observed and cross verified from the corresponding documents by the VT during onsite verification audit. This verification covers the period from 01/05/2014 to 30/04/2016 (including both days).

This verification covers the emission reductions achieved by CPA-8142-001 in its corresponding monitoring period:

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

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.E. -ver. 10
- 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: **84,720 tCO<sub>2e</sub>**

**SECTION F. Certification statement**

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

**“MicroEnergy Credits - Microfinance for Clean Energy Product Lines - Mongolia”**

registered under UNFCCC-No. : POA 8142

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

MP-No.: 02

from: 01/05/2014

to: 30/04/2016

(including both days) as follows:

Emission reductions: **84,720 tCO<sub>2e</sub>**

New Delhi, 22/02/2017

Prakash Kumar Mishra  
Verification Team Leader  
TÜV NORD JI/CDM Certification  
Program

## SECTION G. Verification findings - General

## G.1. Compliance of the monitoring report with the monitoring report form

<b>Means of verification</b>	<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"> <li>• /MR/</li> <li>• /MRT/</li> <li>• /unfccc/</li> </ul>	
<b>Findings</b>	<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 M1, CAR A1
<b>Conclusion</b>	<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 PoA-DD <sup>/PDD/</sup> and the validation report <sup>/VAL/</sup>, 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 <b>not</b> yet been appropriately addressed (for details please refer to appendix 4):
	- N/A

(ii) Open issues from previous verifications:

<input type="checkbox"/>	N/A – as this is the first monitoring period for this CDM project activity.
<input checked="" 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 <b>not</b> 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)
8142-0001	Yes	02.2	Y

## SECTION H. Verification findings – Programme of activities

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

<b>Means of verification</b>	<p>By means of an in-depth review of the PoA-DD/<sup>PoA-DD/</sup> 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 has been checked if relevant technical equipment of the project activity has been exchanged or modified during the monitoring period.</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. The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> <li>• /PoA-DD/</li> <li>• /CPA-DD/</li> <li>• /MR/</li> <li>• /VVS/</li> <li>• /XLS/</li> <li>• /unfccc/</li> <li>• /IM/</li> </ul>				
<b>Findings</b>	<table> <tr> <td><input type="checkbox"/></td> <td>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.</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>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</td> </tr> </table>	<input 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 checked="" 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"/>	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 checked="" 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
<b>Conclusion</b>	<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.
	During the verification an onsite visit was carried out. On the basis of this site visit and the reviewed project documentation it can be confirmed that w.r.t. the realized technology, the project equipment, as well as the monitoring equipment, the project has been implemented and operated as described in the approved PoA-DD and CPA-DD, version 2.2. Moreover, a temporary deviation is applied by the CME for not being able to monitor and account the CERs accrued by the GER blanket in the current monitoring period. Please refer to the corresponding PRC opinion report with this verification report.	

## H.2. Implementation and operation of the management system

<b>Means of verification</b>	<p>By means of review of the final PoA DD, validation report, previous verification report followed by an onsite inspection and interview with the CME, CPA implementer including 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 partner/XAC-Bank 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<sup>/TRNG/</sup> 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"> <li>• /PoA-DD/</li> <li>• /CPA-DD/</li> <li>• /VAL/</li> <li>• /VER/</li> <li>• /MR/</li> <li>• /VVS/</li> <li>• /XLS/</li> <li>• IM</li> <li>• /TRNG/</li> </ul>
<b>Findings</b>	No CARs/CLs have been raised in this context. No correction was required in the context.
<b>Conclusion</b>	The management system is implemented as per the registered PoA-DD & CPA-DD

**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 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 checked="" type="checkbox"/>	The following TDfrMP or TDfMM for which appendix 1 of the PS is applicable have been applied:		
	1	Issue:	The purpose of temporary deviation in this monitoring period is to account the emission reduction from the efficient cooking and heating stoves only and not from the GER blankets though they are included in the CPA. This is due to the current inability to accurately track product overlap in households, which is necessary to take cross-effects of the technologies into account.
	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**

<b>Means of verification</b>	CPA-8142-0001 is involved in disseminating of efficient cook stoves of high efficiency more than specified efficiency of 20% and replacing inefficient “ger” insulation by efficient one in Ulaanbaatar region of Mongolia. These technologies reduce the coal consumption (as primary fuel). All monitoring parameters are assessed to be monitored as per the registered monitoring plan included in the CPA-DD and registered PoA-DD version 2.2.
<b>Findings</b>	No finding is raised in this regard.
<b>Conclusion</b>	The CPA-8142-0001 has been implemented as described in the CPA design document and registered PoA-DD downloaded from the PoA webpage of uNFMCC website and onsite observation by the verification team. It is also found to be implemented in line with the applied methodology AMS-II.E. version 10.

**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 (TDfMP) or Temporary deviations from monitoring methodology or standardized baseline (TDfMM) have been applied during this monitoring period.

However, under this monitoring period, only efficient cooking and heating stoves are credited. Ger blankets are conservatively not credited by PP, though they are included in the CPA which can be credited in future monitoring periods. The same is adopted as the current currently PP is unable to accurately monitor the products overlapping (Ger blanket and house heating system stoves) in households, which is necessary to take cross-effects of the technologies into account as per the applied methodology.

Though, the MEC Tracker Platform contains a unique entry for every CEP sold, identifiable by sysnum, i.e. the unique id number allotted to each of the CEP distributed under the CPA (See **ANNEX 3 - MicroEnergy Credits Tracker Platform Summary**). Each CEP entry in the database contains multiple identifying characteristics to ensure that the product is accurately tracked, including household address, client's government issued passport number, GPS coordinates, and ongoing usage status updated through monitoring. The MEC Tracker Platform also contains information critical to crediting for each CEP, including CEP type, date of installation, and dwelling type. In order to credit two CEPs in the household, the MEC Tracker Platform must demonstrate the number of CEPs in the household, the order of installation, and the sysnum of the “sister” CEP (other CEP in household). The MEC Tracker Platform currently defines the household via a match of household identifiers in the database (address, passport number, name) to identify those households that have purchased multiple CEPs. At this time, the MEC Tracker Platform is partially incomplete with respect to the identification of households and therefore the number and details of multiple CEPs in households. As this affects crediting for each CEP, the CME conservatively chooses to not credit ger blankets in this monitoring period. In subsequent monitoring periods, MEC would strive to complete this information to enable crediting of both CEPs in two installation households.

Non-crediting of the GER Blankets for the purpose of CER calculation is not fully in line with the proposed crediting plan under the CPA which can be treated as temporary deviation from the proposed registered monitoring plan, as CME is unable to precisely determine the emission reductions resulting from distribution of GER blankets. However, these results in conservative calculation of accrued CERs under the current monitoring period. Further in order to ensure that this approach is conservative, after the heating season 2014-15 & 2015-16, a survey was conducted in the GER households where blankets were distributed. For a sample population of 60 GER for each heating season, each of the users has reported reduction in coal consumption as compared to heating seasons prior to the distribution of GER blankets. Details of the same have been submitted by PP which is assessed to be appropriate and in line with onsite visit observation and interview with the end users of the CEPs. This establishes that this temporary change is conservative. Moreover, CME has described during the verification audit to the verification team, that monitoring would improve to ensure that this information is captured from the Heating season 2017-2018 onwards and thus would start crediting of the GER blankets.

This temporary deviation does not require a request for prior approval by the Board, nor does it present a deviation from the applied methodology.

Please refer also to related PRC assessment report.

The result is summarized in the table below.

<input 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	<table border="1"> <tr> <td>Title</td> <td></td> </tr> <tr> <td>Status</td> <td><input type="checkbox"/> under approval; <input type="checkbox"/> approved (approval No.: )</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 (approval No.: )	Appr.date		Ref. No.	
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Appr.date										
Ref.No.										
<input 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 checked="" type="checkbox"/>	The following TDfrMP or TDfMM for which appendix 1 of the PS is applicable have been applied:									
	1	<table border="1"> <tr> <td>Issue:</td> <td>The purpose of temporary deviation in this monitoring period, is to account the emission reduction from the efficient cooking and heating stoves only and not from the GER blankets though they are included in the CPA. This is due to the current inability to accurately track product overlap in households, which is necessary to take cross-effects of the technologies into account.</td> </tr> </table>	Issue:	The purpose of temporary deviation in this monitoring period, is to account the emission reduction from the efficient cooking and heating stoves only and not from the GER blankets though they are included in the CPA. This is due to the current inability to accurately track product overlap in households, which is necessary to take cross-effects of the technologies into account.						
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### 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 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:	
	NA	
	NA	
	<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.	

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

N/A

**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	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:	

### 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

<b>Means of verification</b>	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 Monitoring Plan (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"> <li>• /MR/</li> <li>• /AMS II.E./</li> <li>• /unfccc/</li> </ul>			
<b>Findings</b>	<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"> <li>• General guidelines for SSC CDM methodologies", "Guidelines on the demonstration of additionality of small-scale project activities"</li> <li>• General guidance on leakage in biomass project activities</li> </ul>
		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	
	<input type="checkbox"/>	The breakdown of MP accordance of the applicable SB is as follows:		
		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:			
<b>Conclusion</b>	<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 applied methodology is consistent with the versions on the UNFCCC website. No tools have been applied. No standardised baseline is applied.			

**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**

<b>Means of verification</b>	<p>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.</p> <p>Further it has been checked whether the GWP for the respective period have been correctly applied.</p> <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> <li>• /MR/</li> <li>• /XLS/</li> <li>• /PoA-DD/</li> <li>• /CPA-DD/</li> <li>• /PS/</li> <li>• /VVS/</li> <li>• /unfccc/</li> </ul>	
<b>Findings</b>	<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"/>	<p>The following deviations from the parameters fixed ex-ante or at renewal of crediting period have been identified in the course of this verification:</p> <p>- N/A</p>
	<input type="checkbox"/>	<p>In this context the following CARs, CLs, FARs have been raised:</p> <p>For details please refer to appendix 5</p>
<b>Conclusion</b>	<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"/>	<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>The data and parameters listed in the section G.1 of MR was cross checked with the applied methodology, registered CPA-DD, ER and are found consistent.</p>

**I.4.2. Data and parameters monitored**

<b>Means of verification</b>	<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"> <li>(i) appropriateness of the applied measurement / determination method,</li> <li>(ii) the correctness of the values applied for ER calculation,</li> <li>(iii) the accuracy, and applied QA/QC measures.</li> </ul> <p>The results as well as the verification procedure are described parameter-wise in the project specific verification checklist (Appendix 5).</p>	
<b>Findings</b>	CAR D1, CAR G1, CAR G2, CAR G3, CAR G4 and CAR G5. For details please refer to appendix 4	
<b>Conclusion</b>	<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"/>	<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>During the verification all relevant monitoring parameters (as listed in chapter B.7.1 of the registered CPA-DD) have been verified with regard to the appropriateness of the applied measurement / determination method, the correctness of the values applied for ER calculation, the accuracy, and applied QA/QC measures. The results as well as the verification procedure are</p>

	described parameter-wise in the project specific verification checklist (Appendix 5). After appropriate corrections were carried out by the project participant 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.
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### I.4.3. Implementation of sampling plan

<b>Means of verification</b>	<p>The verification team have assessed 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"> <li>(i) description of the implemented sampling design</li> <li>(ii) collected data</li> <li>(iii) analysis of collected data</li> <li>(iv) demonstration on whether the required confidence/precision has been met.</li> </ul> <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> <li>• /MR/</li> <li>• /XLS/</li> <li>• /PoA-DD/</li> <li>• /CPA-DD/</li> <li>• /HES/</li> <li>• //SSCL/</li> <li>• /ANN-10/</li> <li>• /REGG/</li> <li>• Annex-8/</li> <li>• /CPA-DD/.</li> </ul>																										
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		Description on how the sampling efforts and survey comply with the validated sampling plan:	<p><math>N_{all}</math> is the total number of stoves installed and credited during the monitoring period. <math>N_{all}</math> is adjusted according to actual operational days during a given monitoring period to derive 'Total CEP-Heating Seasons'. The installation date for each CEP listed in Credit Tracker signifies the start of operation for each CEP. The operational days of each CEP is divided by the total number of days of the current monitoring period to determine each individual CEP's 'CEP-Heating Season', the sum of which is 'Total CEP-Heating Seasons'. Samples exceeded calculated minimum sample size for 90/10 confidence/precision.</p>
	3	Parameter:	$C_{y,new,CEP-i}$
		Name:	$C_{y,new,CEP-i}$ represents the quantity of coal used in the heating season in the project scenario for CEP-i installation, weighted average if multiple clusters of CEP for target groups in Ger Area homes in Tonnes coal/HH/heating season
		Description on how the sampling efforts and survey comply with the validated sampling plan:	<p>The quantity of coal used is determined for the following 6 sample frames for the applied monitoring period as follows:</p> <ul style="list-style-type: none"> <li>• Frame 1: Stove in house dwelling type, located in Songinokhairkhan district</li> <li>• Frame 2: Stove in house dwelling type, located in Bayangol district</li> <li>• Frame 3: Stove in house dwelling type, located in other district</li> <li>• Frame 4: Stove in ger dwelling type, located in Songinokhairkhan district</li> <li>• Frame 5: Stove in ger dwelling type, located in Bayangol district</li> <li>• Frame 6: Stove in ger dwelling type, located in other district</li> </ul> <p>The value is derived from a 3<sup>rd</sup> party survey report. i.e. Household Energy Survey (HES)<sup>/HES/</sup> (Household Energy Survey Data Analysis) report. The survey has been carried out by using "simple random sampling" and taking dwelling type and the level of precision of 90/10 into account.</p>
	<input checked="" type="checkbox"/>	In this context the following CARs, CLs, FARs have been raised:	
		CARG1, CAR G3, CAR G4, CAR G5 and CAR G6: Please refer Appendix 4 for details.	
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.	
	Implementation of sampling plan as observed during onsite visit and		



	documents verification, is in line with the applied monitoring methodology and registered monitoring plan.
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### I.5. Compliance with the calibration frequency requirements for measuring instruments

<b>Means of verification</b>	<p>This PoA involves the distribution of clean energy products as efficient heating devices in the Ulaanbaator region in Mongolia, where the majority of households were using inefficient fuel intensive heating stoves. Measurements required for monitoring does not directly require equipment and its calibration in the PP's hand. For stove efficiency test<sup>/ANNEX-5/</sup>, a third party Government body is allowed to test the thermal efficiency of deployed CEP 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"> <li>• /MR/</li> <li>• /XLS/</li> <li>• /PoA-DD/</li> <li>• /PoA-DD/</li> <li>• /AMS. II.E/</li> <li>• /ANNEX-5/</li> </ul>	
<b>Findings</b>	<input type="checkbox"/>	<p>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.</p>
	<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"/>	<p>In this context the following CARs, CLs, FARs have been raised:</p>
		N/A
<b>Conclusion</b>	<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>This CPA does not involved in installation of monitoring equipment which requires calibration, however, based on assessment of documents, HES report and data maintenance and recording procedures, it can be concluded that recording of all the data related to monitoring is appropriate and accurate.</p>

### 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

<b>Means of verification</b>	<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"> <li>• Transparency: It has been checked whether the calculation of baseline emissions is fully traceable and, where used, the Excel calculation provides all calculation formulae.</li> <li>• 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.</li> <li>• Correctness: It has been checked whether the applied formulae and methods for calculating baseline emissions are in accordance with the</li> </ul>
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		<p>monitoring plan and the approved methodology.</p> <ul style="list-style-type: none"> <li>Completeness: It has been checked whether all calculations are complete and without omissions.</li> </ul> <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> <li>/MR/</li> <li>/ANN-1-2/</li> <li>/XLS/</li> <li>/HES/</li> </ul>
<b>Findings</b>	<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>
	<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>CAR G2, CAR G3, CAR G4, and CAR G5</p>
<b>Conclusion</b>	<input 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 checked="" 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 and 5.</p> <p>Where corrections were required a revised 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

<b>Means of verification</b>		<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"> <li>Transparency: It has been checked whether the calculation of project emissions is fully traceable and, where used, the Excel calculation provides all calculation formulae.</li> <li>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.</li> <li>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.</li> <li>Completeness: It has been checked whether all calculations are complete and without omissions.</li> </ul> <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> <li>/MR/</li> <li>/AMS II.E/</li> <li>/XLS/</li> <li>/HES/</li> </ul>
<b>Findings</b>	<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. 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>

	<input type="checkbox"/>	The verification team has identified mistakes in the project emissions calculation or the underlying calculation approaches.
	<input checked="" type="checkbox"/>	In this context the following CARs, CLs, FARs have been raised:
		CAR G2, CAR G3, CAR G4, and CAR G5. For detail, please refer Appendix-4 and 5
<b>Conclusion</b>	<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.
		Where corrections were required a revised 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.

### I.6.3. Calculation of leakage GHG emissions

<b>Means of verification</b>		<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"> <li>• Transparency: It has been checked whether the calculation of project emissions is fully traceable and, where used, the Excel calculation provides all calculation formulae.</li> <li>• 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.</li> <li>• 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.</li> <li>• Completeness: It has been checked whether all calculations are complete and without omissions.</li> </ul> <p>As per the small scale methodology AMS-II. E version 10.0 paragraph 07, “ If the energy efficiency technology is equipment transferred from another activity or if the existing equipment is transferred to another activity, leakage is to be considered” As verified during onsite audit and interview with the PO, XacBank, there are no equipment transfer from another activity and they 100% replace the old stove with new and end user hand over their old stove at the time new stove installation which in turn given/sold to a recycling company. The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> <li>• /MR/</li> <li>• /AMS II.E/</li> <li>• /IM/</li> <li>• /XLS/.</li> </ul>
<b>Findings</b>	<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"/>	The verification team has identified mistakes in the project emissions calculation or the underlying calculation approaches.
	<input type="checkbox"/>	In this context the following CARs, CLs, FARs have been raised:
<b>Conclusion</b>	<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.
		As stated in the registered PoA-DD, leakage may be considered if the displaced baseline stove is not dismantled or if it is put to a secondary purpose that does not involve cooking or heating. The PoA aims to dismantle 100% of old stoves. As per the assessment of House Hold Energy Survey report which was found included with a survey question asking respondents about the fate of the previous stove which was found confirmed during onsite visit that all the households reported that they gave up their stove at installation. The same is also in line with stove dismantling procedure <sup>/Annex-7/</sup> in the registered PoA-DD.

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

<b>Means of verification</b>		The verification team has checked if the MR includes a summary table of the emission reductions calculation specifying separately <ul style="list-style-type: none"> <li>• Total baseline emissions,</li> <li>• Total project emissions,</li> <li>• Total leakage,</li> <li>• Total emission reductions.</li> </ul> It has been assessed whether the values are correct or need to be revised as a consequence of issues identified above.
<b>Findings</b>	<input checked="" type="checkbox"/>	Section H.4 of the MR includes in a summary table of the emission reductions calculation.
	<input checked="" type="checkbox"/>	The summary table specified the total baseline, project and leakage emissions as well as the total emission reductions separately.
	<input type="checkbox"/>	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.
	<input checked="" type="checkbox"/>	During the verification issues with impact on the ER calculation have been identified.
	<input checked="" type="checkbox"/>	In this context the following CARs, CLs, FARs have been raised: CAR, CAR G2, CAR G3, CAR G4, CAR G5 and CAR G6
<b>Conclusion</b>	<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.
		Where corrections were required a revised 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 emission reduction calculation is overall correct.

Specific-case CPA reference number	Baseline emissions or baseline net GHG removals by sinks (tCO <sub>2</sub> e)	Project emissions or actual net GHG removals by sinks (tCO <sub>2</sub> e)	Leakage (tCO <sub>2</sub> e)	GHG emission reductions or net GHG removals by sinks (tCO <sub>2</sub> 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

Specific-case CPA reference number	Baseline emissions or baseline net GHG removals by sinks (tCO <sub>2</sub> e)	Project emissions or actual net GHG removals by sinks (tCO <sub>2</sub> e)	Leakage (tCO <sub>2</sub> e)	GHG emission reductions or net GHG removals by sinks (tCO <sub>2</sub> 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
CPA 001 heating season 2014-15	139,429	96,310	0	0	43,118	43,118
CPA 001 heating season 2015-16	145,701	104,098	0	0	41,602	41,602
<b>Total</b>	<b>285,130</b>	<b>200,408</b>	<b>0</b>	<b>0</b>	<b>84,720</b>	<b>84,720</b>

A year wise accrued emission by per CPA is presented in table below:

Project Activity	ER <sub>y</sub> (tCO <sub>2</sub> e)			
	2014	2015	2016	Total
CPA #0001	24,184	42,182	18,354	84,720

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

<b>Means of verification</b>	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.	
<b>Findings</b>	<input 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 checked="" 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:
<b>Conclusion</b>	<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.
	Comparison of GHG emission reductions from the estimated value in the CPA-DD and the current monitoring period is sufficiently and transparently provided which is assessed to be in line with CDM PS and MR filling guideline.	

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
8142-0001	100,266 (2 years)	84,720 (for two years starting from 01-05-2014 to 30-04-2016)

## I.6.6. Remarks on difference from estimated value in registered CPA-DD

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.	
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.
	Emissions reductions achieved during the monitoring period are slightly higher than the values estimated in the ex-ante calculation of registered CPA-DD for the stoves (excluding GER Blankets). These are due to seasonal variations in the Baseline Coal Consumption which is derived from the regression model with variables such as wind speed and average temperature, the same was also observed as per the interview with the different stakeholders/end users and third party expert consultant...	

## Appendix 1. Abbreviations

Abbreviations	Full texts
CA	Corrective Action / Clarification Action
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CO <sub>2</sub>	Carbon dioxide
CO <sub>2eq</sub>	Carbon dioxide equivalent
CL	Clarification Request
CME	Co-ordinating Managing Entity
XacBank	XAcBank, CPA implémenter
DVerR	Draft Verification Report
ER	Emission Reduction
FAR	Forward Action Request
GHG	Greenhouse gas(es)
CEP	Clean Energy Products
HES	Household Energy Survey
IM	Interview Memo
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
MEC	Micro Energy Credits
QMS	Quality Management System

<b>UNFCCC</b>	<b>United Nations Framework Convention on Climate Change</b>
<b>VT</b>	<b>Validation Team</b>
<b>VVS</b>	<b>Validation and Verification Standard</b>
<b>XLS</b>	<b>Emission Reduction Calculation Spread Sheet</b>



## Appendix 2. Competence of team members and technical reviewers



### Statement of Competence

Appointment and authorization according to the procedures of the TÜV NORD JICDM Certification Program

**Mr. Prakash Kumar Mishra**

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

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewables
3.1	Energy demand

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S01-VA050-F20 rev3 / 2012-10-26

S03\_S01-VA050-F20\_2016-07-01\_rev10.doc

S01-VA050-F20 rev3 / 2012-10-26



### Statement of Competence

Appointment and authorization according to the procedures of the TÜV NORD JICDM Certification Program

**Mr. David Lubanga**

SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor (Validation, Verification)	2018-10-20
VCS / ISO 14064-2	Lead Assessor	2018-10-20

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewables
3.1	Energy demand

251 - Rev. 4, Date: 2015-10-21

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S01-VA050-F20 rev3 / 2012-10-26

143\_S01-VA050-F20\_2015-01-05\_rev4.doc

S01-VA050-F20 rev3 / 2012-10-26



### Statement of Competence

Appointment and authorization according to the procedures of the TÜV NORD JICDM Certification Program

**Mr. Rainer Winter**

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification) Technical Reviewer	2019-07-01
JI	Senior Assessor Technical Reviewer	2019-07-01
VCS / ISO 14064-2	Senior Assessor Technical Reviewer	2019-07-01

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.1	Thermal Energy Generation
1.2	Renewables
4.1	Cement and lime production
4.2	Paper
5.1	Chemical Industry
5.2	Caprolactam, nitric and adipic acid
8.1	Mining/mineral production
9.1	Aluminium and magnesium production
9.2	Iron, steel and Ferro-alloy production
11.1	Emissions of fluorinated gases
11.2	Refrigerant gas production
12.1	Chemical industry
13.1	Solid waste and wastewater

003 - Rev. 10, Date: 2016-07-01



### Statement of Competence

Appointment and authorization according to the procedures of the TÜV NORD JICDM 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
1.1	Thermal energy generation
1.2	Renewables
2.1	Energy distribution
3.1	Energy demand
4.1	Cement and lime production
4.2	Paper
5.2	Caprolactam, nitric and adipic acid
9.1	Aluminium and magnesium production
9.2	Iron, steel and Ferro-alloy production
13.1	Solid waste and wastewater
13.2	Manure

163 - Rev. 4, Date: 2015-01-05

### Appendix 3. Documents reviewed or referenced

No.	Author	Reference	Title	References to the document	Provider
1	UNFCCC	/MT/	Methodology and Tool <ul style="list-style-type: none"> <li>AMS II.E Energy efficiency and fuel switching measures for buildings version 10"</li> <li>Assessment of debundling for small-scale project activities, version 04</li> </ul>	<a href="http://cdm.unfccc.int">http://cdm.unfccc.int</a>	Other
2	PP	/CPA-DD/	Component Project Activity Design Document titled "MicroEnergy Credits -- Microfinance for Clean Energy Product Lines – Mongolia-CPA No.001", version 2.2	<a href="http://cdm.unfccc.int">http://cdm.unfccc.int</a>	other
3	PP	/PoA-DD/	Programme of Activities Design Document titled "MicroEnergy Credits – Microfinance for Clean Energy Product Lines – Mongolia", version 2.2		
4	MEC	/ANNEX-1/ <sup>XLS/</sup>	ER Calculations spreadsheet and & House hold Energy Survey-2014-15 and 2015-16		
5	MEC	/ANNEX-2/ <sup>XLS/HES/</sup>	ER Calculations spreadsheet and & House hold Energy Survey-2014-15 and 2015-16		Other
6		/ANN-3/ <sup>CTP/</sup>	MicroEnergy Credits Tracker Platform Summary_v1	2016	Other
7		/ANN-4/ <sup>HES/</sup>	MCA Mongolia Household Survey Report	2011-2012	other
8	SEET/MEC	/ANN-5/ <sup>TECH/</sup>	Stove Testing Report(All tests were conducted by the Stove Emissions and Efficiency Testing (SEET) Laboratory in Ulaanbaatar Mongolia)	2013-2014	Other
09	MEC	/ANNEX-6/	Baseline Fuel Consumption Analysis	2011-2012	
10	MEC	/ANN-7/	Stove Dismantling procedures	2011	Other
11	MEC	/ANN-8/ <sup>CTP/</sup>	MEC Tracker Database_CPA No. 001_v1	2015-2016 <a href="http://tracker3.microenergycredits.net/admin/xac">http://tracker3.microenergycredits.net/admin/xac</a>	Other
12	MEC	/ANN-9/	Survey GER Blanket Confirmation	2016	Other
13	MEC	/ANN-10/ <sup>SSCAL/XLS/</sup>	Sample Size calculation spreadsheet	2016	Other
14	DOE	/CPM/	TÜV NORD JI / CDM CP Manual (incl. CP procedures and forms)		Other
14	IPCC	/IPCC/	1. 1996 IPCC Guidelines for National Greenhouse Gas Inventories: work book 2. 2006 IPCC Guidelines for National Greenhouse Gas Inventories: work book	<a href="http://www.ipcc-nggip.iges.or.jp">www.ipcc-nggip.iges.or.jp</a>	Other

No.	Author	Reference	Title	References to the document	Provider
15	UNFCCC	<b>/KP/</b>	Kyoto Protocol (1997)	<a href="http://unfccc.int/kyoto_protocol/items/2830.php">http://unfccc.int/kyoto_protocol/items/2830.php</a>	Other
16	UNFCCC	<b>/MA/</b>	Decision 3/CMP. 1 (Marrakesh – Accords)	<a href="http://cdm.unfccc.int/Reference/COPMOP/index.html">http://cdm.unfccc.int/Reference/COPMOP/index.html</a>	Other
17	UNFCCC	<b>/MRT/</b>	Monitoring Report Form (CDM-PoA-MR-FORM), Version 01.0	<a href="https://cdm.unfccc.int/Reference/PDDs_Forms/index.html">https://cdm.unfccc.int/Reference/PDDs_Forms/index.html</a>	Other
18	UNFCCC	<b>/PS/</b>	CDM Project Standard (Version 9.0)	<a href="http://cdm.unfccc.int/Reference/Standards/index.html">http://cdm.unfccc.int/Reference/Standards/index.html</a>	Other
19	PP	<b>/VAL/</b>	Validation Report for PoA project “MicroEnergy Credits -- Microfinance for Clean Energy Product Lines - Mongolia” report No.2012-9611  Validation Report for CPA project “MicroEnergy Credits -- Microfinance for Clean Energy Product Lines - Mongolia”- CPA No.001, reference No.2012-9655	unfccc	Other
20	MEC	<b>/TECH/</b>	Technical specification of CEP	-	Other
21	UNFCCC	<b>/VVS/</b>	CDM Validation and Verification Standard (Version 09.0)	<a href="http://cdm.unfccc.int/Reference/Standards/index.html">http://cdm.unfccc.int/Reference/Standards/index.html</a>	Other
22	UNFCCC	<b>/G-SS/</b>	“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)	<a href="https://cdm.unfccc.int/Reference/Guidclarif/index.html">https://cdm.unfccc.int/Reference/Guidclarif/index.html</a>  <a href="http://cdm.unfccc.int/Reference/Standards/index.html">http://cdm.unfccc.int/Reference/Standards/index.html</a>	Other
23	UNFCCC	<b>/GOT/</b>	Glossary “CDM terms” (version 08.0)	<a href="https://cdm.unfccc.int/filestorage/e/x/t/extfile-20150226124447549-glos_CDM.pdf/glos_CDM.pdf?t=UmZ8bnFjODI3fDCW9A3vJwR03kQQh4sbLiYu">https://cdm.unfccc.int/filestorage/e/x/t/extfile-20150226124447549-glos_CDM.pdf/glos_CDM.pdf?t=UmZ8bnFjODI3fDCW9A3vJwR03kQQh4sbLiYu</a>	Other
24	PP	<b>/MR/</b>	• MicroEnergy Credits - Microfinance for Clean Energy		CME

No.	Author	Reference	Title	References to the document	Provider
			Product Lines – Mongolia dated 08/09/2016, version 1.0  • MicroEnergy Credits - Microfinance for Clean Energy Product Lines – Mongolia dated 30/12/2016, version 2.0  • MicroEnergy Credits - Microfinance for Clean Energy Product Lines – Mongolia dated 23/01/2017, version 3.0		
25	PP	/TRNG/ /ANN-10/	• PO Staff Training Records Usage Survey report attachment		Other
26	TN CERT GmbH	/VER/	1st Periodic Verification and Certification Report: MicroEnergy Credits --Microfinance for Clean Energy Product Lines – Mongolia, dated 15/09/2015		DOE
27	PP	/REGG/	Regression analysis sheet for baseline coal consumption		PP

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

**Table 4. Remaining FAR from validation and/or previous verification**

<b>FAR ID</b>		<b>Section no.</b>		<b>Date:</b> DD/MM/YYYY
<b>Description of FAR</b>				
No FAR is raised during the validation/verification				
<b>Project participant response (1<sup>st</sup> round)</b>				<b>Date:</b> DD/MM/YYYY
<b>Documentation provided by project participant (1<sup>st</sup> round)</b>				
<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:			
<b>DOE assessment (1<sup>st</sup> round)</b>				<b>Date:</b> DD/MM/YYYY
<b>Conclusion</b> <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 2. CL from this verification**

<b>CL ID</b>	CL B1	<b>Section no.</b>	B.1	<b>Date:</b> 25/10/2016
<b>Description of CL</b>				
Section B.1 of the Monitoring Report contains information on the training provided to the onsite monitoring team. Same was also assessed through the personnel interview during the onsite verification visit. However, training records and details of the same to be submitted to the verification.				
<b>Project participant response (1<sup>st</sup> round)</b>				<b>Date:</b> 30/12/2016
Enclosed are the training records as an evidence of training provided to the onsite monitoring team.				
<b>Documentation provided by project participant (1<sup>st</sup> round)</b>				
<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 checked="" type="checkbox"/>	Training record of the XacBank representative:			
<b>DOE assessment (1<sup>st</sup> round)</b>				<b>Date:</b>
CME/PP has provided the training records which are in line with interview onsite performed with CPA implementer and the registered monitoring plan.				
<b>Conclusion</b> <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		

<b>CL ID</b>	CL D1	<b>Section no.</b>	D.2	<b>Date:</b> 25/10/2016
<b>Description of CL</b>				
Draft MR version 1.0 Description of CPAs location where CPAs are implemented (six district under Ulaanbaatar, as per the survey report, onsite visit observation and document verification including credit tracker platform) are not sufficiently and clearly provided in the section D.2 of the MR.				
<b>Project participant response (1<sup>st</sup> round)</b>				<b>Date:</b> 30/12/2016
Details of the six districted where various CEPs are distributed under the CPA have now been included in the section D.2 of the revised Monitoring Report.				
<b>Documentation provided by project participant (1<sup>st</sup> round)</b>				
<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): D.2	New version No.: 02	
<input type="checkbox"/>	Changes in XLS	Worksheet(s): ER (Ann3)	New version No.:	
<input type="checkbox"/>	Other:			
<b>DOE assessment (1<sup>st</sup> round)</b>				<b>Date:</b> 11-01-2016
All six districts under which the proposed CPA is implemented as verified during onsite verification site visit are found included in the revised MR section D.2.				
<b>Conclusion</b> <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		

<b>CL ID</b>	CL E1	<b>Section no.</b>	E	<b>Date:</b> 25/10/2016
<b>Description of CL</b>				
Description of the temporary deviation from the applied monitoring methodology and registered MP including duration of the deviation is not appropriately provided.				
<b>Project participant response (1<sup>st</sup> round)</b>				<b>Date:</b>
The description of the temporary deviation has been revised in the monitoring report also duration of the deviation has been provided now. Non-crediting of one of the CEP, the GER Blankets, results in a temporary deviation from the registered monitoring plan, as CME is unable to precisely determine the emission reductions resulting from distribution of GER blankets. Further in order to ensure that this approach is conservative, a survey was conducted in the GER households where blankets were distributed. For a sample population of 60 GER for each heating season, 100% of the users have reported reduction in coal consumption as compared to heating seasons prior to the distribution of GER blankets. This establishes that this temporary change is conservative. Further, PP would improve the monitoring to ensure that this information is captured from the Heating season 2017-2018 onwards and thus would then start crediting of the GER blankets.				

Documentation provided by project participant (1 <sup>st</sup> 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 checked="" type="checkbox"/> Changes in MR	Section(s): E1	New version No.: 02
<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:
<input type="checkbox"/> Other:		
DOE assessment (1 <sup>st</sup> round)		Date:
<p>Non-crediting of the GER Blankets for the purpose of CER calculation is assessed to be conservative and do not result in deviation from either applied methodology and registered monitoring plan. Moreover, this is treated by PP as temporary deviation from the proposed registered monitoring plan as it accounts for the calculation of accrued CERs from the GER distribution under the CPA-01. As CME is unable to precisely determine the emission reductions resulting from distribution of GER blankets. However, these results in conservative calculation of accrued CERs under the current monitoring period. Further in order to ensure that this approach is conservative, after the heating season 2014-15 &amp; 2015-16, a survey was conducted in the GER households where blankets were distributed. For a sample population of 60 GER for each heating season, each of the users has reported reduction in coal consumption as compared to heating seasons prior to the distribution of GER blankets. Moreover, CME has described during the verification audit to the verification team, that monitoring would improve to ensure that this information is captured from the Heating season 2017-2018 onwards and thus would start crediting of the GER blankets. Based on above and interview during onsite visit with the CEP users, verification team can accept this approach by PP to be appropriate and in line with onsite visit observation.</p>		
<b>Conclusion</b> <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 3. CAR from this verification

CAR ID	M1	Section no.	Cover Page	Date: 25/10/2016
<b>Description of CAR</b>				
Draft MR version 1.0 As verified from the PoA-DD at the UNFCCC website, version number of the same is version 2.2. However, the cover page of draft MR mentioned the version of the PoA-DD as 3. Moreover, DD/MM/YYYY format shall be followed in accordance with MR filling guidelines.				
<b>Project participant response (1<sup>st</sup> round)</b>				<b>Date: 30/12/2016</b>
The correct version number of the PoA-DD as per UNFCCC website page of the PoA-8142 is version 2.2. The version number got mistakenly mentioned as version 3. Same has now been corrected in the revised Monitoring Report enclosed herewith.  Link of the registered PoA at the UNFCCC website: <a href="http://cdm.unfccc.int/ProgrammeOfActivities/poa_db/QF6PYE8DBOKW1UC7TV549023AGLZXN/view">http://cdm.unfccc.int/ProgrammeOfActivities/poa_db/QF6PYE8DBOKW1UC7TV549023AGLZXN/view</a> Also, the date format has been made consistent across the monitoring report and updated to DD/MM/YYYY format.				
<b>Documentation provided by project participant (1<sup>st</sup> round)</b>				
<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): Cover page	New version No.: 02		
<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:		
<input type="checkbox"/> Other:				
<b>DOE assessment (1<sup>st</sup> round)</b>				<b>Date: 11-01-2017</b>
The cover page of the revised MR is found updated with the version number of the registered PoA-DD as 2.2 which is correct and acceptable.				
<b>Conclusion</b> <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	A1	Section no.	A.2	Date: 25/10/2016
<b>Description of CAR</b>				

Draft MR version 1.0		
Section A.2 of the MR is incomplete with regards to the information whether person/entity is Also the CME in Appendix-1 as required by the guideline for filling the MR.		
<b>Project participant response (1<sup>st</sup> round)</b>		<b>Date:</b> 30/12/2016
The person/entity responsible for completing the Monitoring Report is also the CME in Appendix-1. Same has been mentioned in the section A.2 of the revised Monitoring Report.		
<b>Documentation provided by project participant (1<sup>st</sup> round)</b>		
<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): A.2	New version No.: 02
<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:
<input type="checkbox"/> Other:		
<b>DOE assessment (1<sup>st</sup> round)</b>		<b>Date:</b> 11-01-2017
Revised MR is assessed to be appropriately complete and in line with guideline for filling the MR.		
<b>Conclusion</b> <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	

<b>CAR ID</b>	D1	<b>Section no.</b>	D	<b>Date:</b> 25/10/2016
<b>Description of CAR</b>				
Draft MR version 1.0				
Value of ER provided under section D.1 is not correct, please also compare with ER sheet and other part of this MR for values for thermal energy savings and other parameters.				
<b>Project participant response (1<sup>st</sup> round)</b>				<b>Date:</b> 30/12/2016
All the values under the section D.1 has been corrected in accordance with the XLS spreadsheet for the ER Calculations. Same has also been corrected across the revised Monitoring report.				
<b>Documentation provided by project participant (1<sup>st</sup> round)</b>				
<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): D.1		New version No.: 02	
<input type="checkbox"/> Changes in XLS	Worksheet(s):		New version No.:	
<input type="checkbox"/> Other:				
<b>DOE assessment (1<sup>st</sup> round)</b>				<b>Date:</b> 11-01-2017
Revised MR is completely assessed against the revised XLS, which is found to be in line with each other and calculation therein is transparent and traceable.				
<b>Conclusion</b> <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			

<b>CAR ID</b>	G1	<b>Section no.</b>	G.2	<b>Date:</b> 25/10/2016
<b>Description of CAR</b>				
Draft MR version 1.0				
Description of parameter "N <sub>all</sub> " is Not consistent with generic CPA-DD and registered PoA-DD.				
<b>Project participant response (1<sup>st</sup> round)</b>				<b>Date:</b> 30/12/2016
Description of the parameter "N <sub>all</sub> " is made consistent in the revised Monitoring Report with the generic CPA-DD and registered PoA-DD				
<b>Documentation provided by project participant (1<sup>st</sup> round)</b>				
<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:				
<b>DOE assessment (1<sup>st</sup> round)</b>				<b>Date:</b> 11-01-2017
Revised MR is found corrected with regarded to the description of parameter N <sub>all</sub> and in line with the registered CPA-DD. CAR is closed out.				

<b>Conclusion</b> <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

<b>CAR ID</b>	G2	<b>Section no.</b>	G.2	<b>Date:</b>	25/10/2016	
<b>Description of CAR</b>						
Draft MR version 1.0						
Parameter "POF - Product Operation Fraction" values provided under section G.2 are not consistent with the baseline survey analysis sheet and ER calculation spreadsheet. Furthermore, All data presented in section G. for POF survey result is not consistent with the values verified in the HES survey report.						
<b>Project participant response (1<sup>st</sup> round)</b>					<b>Date:</b>	30/12/2016
There has been an error in transferring the values from ER Calculations spreadsheet/HES Analysis Sheet to the Monitoring Report. Same has been corrected in the revised Monitoring Report which now mentions the accurate value of the parameter "POF" in section G.2.						
Also, all other data related to calculation of "POF" in section G.3 of the monitoring report as well as has also been corrected.						
<b>Documentation provided by project participant (1<sup>st</sup> round)</b>						
<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, G.3	New version No.:	02	
<input type="checkbox"/>	Changes in XLS	Worksheet(s):		New version No.:		
<input type="checkbox"/>	Other:					
<b>DOE assessment (1<sup>st</sup> round)</b>					<b>Date:</b>	11-01-2017
Section G.2 of the revised MR is assessed against HES analysis sheet and to be correctly transcribed the value. The same is also in line with onsite document review and interview with the CME and Survey personnel. CAR is closed out.						
<b>Conclusion</b> <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					

<b>CAR ID</b>	G3	<b>Section no.</b>	G.2, G.3	<b>Date:</b>	25/10/2016	
<b>Description of CAR</b>						
Draft MR version 1.0						
Values of parameter " $C_{y,new,CEP-I}$ " presented in section G.2 of the webhosted MR are not consistent with ER calculation spreadsheet and House Hold Survey analysis sheet.						
Furthermore, all data presented in section G.3 for parameter " $C_{y,new,CEP-I}$ " survey result is not consistent with the values verified in the HES survey report.						
<b>Project participant response (1<sup>st</sup> round)</b>					<b>Date:</b>	30/12/2016
There has been an error in transferring the values from ER Calculations spreadsheet/HES Analysis Sheet to the Monitoring Report. Same has been corrected in the revised Monitoring Report which now mentions the correct value of the parameter " $C_{y,new,CEP-I}$ " in section G.2.						
Also, all other data related to calculation of " $C_{y,new,CEP-I}$ " in section G.3 of the monitoring report has also been corrected.						
<b>Documentation provided by project participant (1<sup>st</sup> round)</b>						
<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, G.3	New version No.:	02	
<input type="checkbox"/>	Changes in XLS	Worksheet(s):		New version No.:		
<input type="checkbox"/>	Other:					
<b>DOE assessment (1<sup>st</sup> round)</b>					<b>Date:</b>	11-01-2017
Section G.2 and G. 3 of the revised Mr is assessed to be appropriately revised in line with the HES and XLS spreadsheet.						



<b>Conclusion</b> <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

<b>CAR ID</b>	G4	<b>Section no.</b>	G.2	<b>Date:</b> 25/10/2016
<b>Description of CAR</b>				
Draft MR version 1.0				
Values for coal consumptions under parameter “C <sub>y,old,CEPi</sub> ” in section G.2 are not correct and not in line with ER calculation spreadsheet and HES report.				
<b>Project participant response (1<sup>st</sup> round)</b>				<b>Date:</b> 30/12/2016
There has been an error in transferring the values from ER Calculations spreadsheet to the Monitoring Report. Same has been corrected in the revised Monitoring Report which now mentions the correct value of the parameter “C <sub>y,old,CEP-I</sub> ” in section G.2.				
<b>Documentation provided by project participant (1<sup>st</sup> round)</b>				
<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:			
<b>DOE assessment (1<sup>st</sup> round)</b>				<b>Date:</b> 11-01-2017
Value of coal consumption is assessed to be correctly provided in the revised MR and in line with assessed HES and onsite observation and interview.				
<b>Conclusion</b> <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			

<b>CAR ID</b>	G5	<b>Section no.</b>	G.2	<b>Date:</b> 25/10/2016
<b>Description of CAR</b>				
Draft MR version 1.0				
Values monitored/recorded for parameter “Ty,s household stoves and/or insulation” and parameter “WS <sub>y,s household stoves and/or insulation</sub> ” under section G.2 of the webhosted monitoring report does not fall under the current applied monitoring Period.				
<b>Project participant response (1<sup>st</sup> round)</b>				<b>Date:</b> 30/12/2016
By mistake, the Monitoring report had mentioned the previous monitoring period's values of parameter “Ty,s household stoves and/or insulation” and parameter “WS <sub>y,s household stoves and/or insulation</sub> ”.				
Section G.2 of the revised monitoring report now mentions the values of parameters “Ty,s household stoves and/or insulation” and parameter “WS <sub>y,s household stoves and/or insulation</sub> ” as per the current applied monitoring period.				
<b>Documentation provided by project participant (1<sup>st</sup> round)</b>				
<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:			
<b>DOE assessment (1<sup>st</sup> round)</b>				<b>Date:</b>
Revise monitoring report is assessed to be revised with regard to values of parameter “Ty,s household stoves and/or insulation” and parameter “WS <sub>y,s household stoves and/or insulation</sub> ” under section G.2 which is also in accordance with onsite observation, and HES data analysis sheet and XLS spreadsheet. CAR is closed out.				
<b>Conclusion</b> <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			

<b>CAR ID</b>	G6	<b>Section no.</b>	G.3	<b>Date:</b> 25/10/2016
<b>Description of CAR</b>				

Draft MR version 1.0			
<p>Section G.3 of the webhosted Monitoring report is not assessed to be appropriately completed in accordance with the requirements laid down in the section G.3 of the "Attachment: Instructions for filling out the monitoring report form for CDM programme of activities". Please provide a detailed information as per the requirements on the sampling procedures followed :</p> <p>Provide a description on how each specific-case CPA conducted the sampling for those data and parameters according to the sampling plan. Include:</p> <p>(a) Description of implemented sampling design;</p> <p>(b) Collected data (electronic spreadsheets may be attached and referenced);</p> <p>(c) Analysis of the collected data;</p> <p>(d) Demonstration of whether the required confidence/precision level has been met;</p> <p>(e) Demonstration of whether the selected samples are representative of the population;</p> <p>(f) Demonstration of whether the samples were randomly selected and are representative of the population.</p>			
<b>Project participant response (1<sup>st</sup> round)</b>			<b>Date:</b> 30/12/2016
<p>Description of the implemented sampling plan is now provided in the section G.3 of the revised Monitoring Report and HES analysis sheet along with ER calculation sheet is also attached. Section G.3 of the reviser Monitoring Report has also now demonstrated that how required confidence/precision level of 90/10 as required by registered monitoring plan is attained. Moreover, selected samples which are the representative of the entire population under CPA-0001 is clearly provided in the attached HES analysis sheet. Revised ER calculation spreadsheet along with HES analysis sheets are attached with this response.</p>			
<b>Documentation provided by project participant (1<sup>st</sup> round)</b>			
<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):	New version No.: 02
<input type="checkbox"/>	Other:		
<b>DOE assessment (1<sup>st</sup> round)</b>			<b>Date:</b>
<p>Section G.3 of the revised Monitoring report is assessed to be appropriately completed in accordance with the requirements laid down in the section G.3 of the "Attachment: Instructions for filling out the monitoring report form for CDM programme of activities". All information related to data monitoring, sampling and analysis is in line with applied methodology and registered monitoring plan. CAR is closed out.</p>			
<b>Conclusion</b> <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	

<b>CAR ID</b>	H1	<b>Section no.</b>	H	<b>Date:</b> 25/10/2016
<b>Description of CAR</b>				
<p>Draft MR version 1.0</p> <p>Demonstration of calculation of accrued emission reduction and project emission under section H.1 is not correct and in line with the survey results provided in the HES report. Moreover, ER values presented in the table 7.1 and table 7.2 are also not correct and consistent.</p> <p>Please also refer section H.4 and H.5 in this regard. Please refer CDM-PoA-MR-FORM version 01, PS § 248.</p>				
<b>Project participant response (1<sup>st</sup> round)</b>				<b>Date:</b> 30/12/2016
<p>There has been an error in transferring the values from ER Calculations spreadsheet to the Monitoring Report. Same has been corrected in the revised Monitoring Report which now provides the accurate demonstration of calculation of accrued emission reduction and project emission under section H.1.</p> <p>The ER values presented in the table 7.1 and table 7.2 have also been corrected and made consistent with rest of the Monitoring Report. Similar corrections have been made in the section H.4 &amp; H.5</p>				
<b>Documentation provided by project participant (1<sup>st</sup> round)</b>				
<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): H.1; H.4; H.5	New version No.: 02	

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<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:
<input type="checkbox"/> Other:		
<b>DOE assessment (1<sup>st</sup> round)</b>		<b>Date: 11-01-2017</b>
<p>Demonstration of calculation of accrued emission reduction and project emission under section H.1 of the revised MR is assessed to be correct and in line with the survey results provided in the HES report and XLS spreadsheet. ER values are revised throughout the revised Monitoring report in consistency with ER calculation spread sheet. CAR is closed out.</p>		
<b>Conclusion</b> <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	

## 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.
<b>A. N<sub>all</sub>:</b>		<b>Total number stoves disseminated</b>		
<p><b>a) Measurement / Determination method (VVS, §§ 389-393)</b>  <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. Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	<p>/MR/ /METH/ /CPA-DD/ /XLS-ANNEX-1-2/ /ANN-8/<sup>CTP</sup></p>	<p><i>Description:</i></p> <p>The value is derived from the excel database, named “tracker platform”. I.e. the installation data of stoves will be recorded as per stove on-site check which was performed by monitoring staff per android system. The hardcopy documents i.e. the delivery note is be counter-signed by household..</p> <p>The N<sub>all</sub> is monitored continuously.</p> <p><i>Verifier’s action:</i></p> <p>The N<sub>all</sub> covering this monitoring period was verified by verification team from the recorded data in the excel sheet and credit tracker database. The data is taken as the input for the ER calculations meaning it is the basis for determining of the CPA emission reductions. The same was also cross verified by the onsite observation and interview with the CME, CPA implementer, consultant and verification on database system maintained by the CME.</p> <p><i>Conclusion:</i></p> <p>The value of this parameter is monitored and recorded according to the registered monitoring plan. However CAR G1 was raised and closed successfully.</p>	CAR G1	OK
<p><b>b) Accuracy and QA/QC Procedure (VVS, §§ 394-400)</b>  <i>In case of measured (or estimated) values, check whether the accuracy of equipment used for</i></p>	/MR/	<p><i>Description:</i></p> <p>The N<sub>all</sub> could be cross-evidenced by stove installation and delivery form. Random samples have been taken by verification</p>	CAR G1	OK

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Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>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>team and no unacceptable inaccuracies have been identified.</p> <p><i>Verifier's action:</i></p> <p>The data flow of N<sub>all</sub> was checked by verification team. Correspondingly hardcopy evidence, i.e. the stove installation form, stove delivery form, bank transfer note were random sampled.</p> <p><i>Conclusion:</i></p> <p>It is concluded that there are no inaccuracies in the calculation of this parameter.</p>		
<p><b>c) Correctness</b> <b>(VVS, §§ 389-393)</b></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/ /XLS/ <b>/ANN-8/CTP</b></p>	<p><input checked="" type="checkbox"/> Correct      <input type="checkbox"/> Not correct (initial assessment)</p> <p><i>Description:</i></p> <p>The N<sub>all</sub> is recorded and updated once the stove installed. During the registration and login process on tracker, the stove delivery form, bank transfer note is cross checked. The inaccuracy is low.</p> <p><i>Verifier's action:</i></p> <p>The data flow of N<sub>all</sub> was checked by verification team. Correspondingly hardcopy evidence, i.e. the stove installation, stove delivery form were random sampled.</p> <p><i>Conclusion:</i></p> <p>It is concluded by means of onsite inspection and review stove installation database, the data reported and transcribed from the database i.e. credit tracker platform in the MR is correct.</p>	Ok	OK
<b>B. POF</b>		<b>Product Operation Fraction</b>		
<p><b>a) Measurement / Determination method</b> <b>(VVS, §§ 389-393)</b></p>	<p>/MR/ /CPA-</p>	<p><i>Description:</i></p> <p>The value is derived from the Household Energy Survey (HES)</p>	CAR G2	OK

# CDM-PoA-VCR-FORM

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<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>	DD/ /HES/ /IM/	<p>(Household Energy Survey Data Analysis) report, which is performed by independent project consultant. The project development officer office fill the stove status into the tracker database once has been informed by on-site monitoring staff and android system.</p> <p>This parameter is calculated as Number of households who reported they were using CEP during survey divided by total number of households surveyed of same dwelling type that purchased CEP type.</p> <p>The POF is monitored at least every 2 years.</p> <p><i>Verifier's action:</i></p> <p>The POF in HES report covering the monitoring period has been checked by verification team</p> <p>On-site check and phone call interview records from monitoring staff have been random sampled and cross checked.</p> <p><i>Conclusion:</i></p> <p>The measurement approach of parameter data is according to the registered CPA-DD and registered monitoring plan.</p> <p>Samples exceeded calculated minimum sample size for 90/10 confidence/precision</p> <p>However, during course of verification CAR G2 was raised and closed successfully.</p>		
<p><b>b) Accuracy and QA/QC Procedure</b> <b>(VVS, §§ 394-400)</b></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</i></p>	/MR/ /CPA-DD/ /HES/ /IM/	<p><i>Description:</i></p> <p>The POF could be cross evidenced by stove installation and on-site monitoring records. Random samples have been taken by verification team and no unacceptable inaccuracies have been identified.</p> <p><i>Verifier's action:</i></p>	ok	OK

# CDM-PoA-VCR-FORM

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>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>The POF was checked by verification team. Correspondingly hardcopy evidence, i.e. the stove installation and on-site monitoring records were random sampled along with the verification of HES and interview with the household and involved personnel in the monitoring from CME and PO.</p> <p><i>Conclusion:</i></p> <p>The parameter is monitored according to the registered CPA-DD and monitoring plan approved at the time of PoA registration.</p>		
<p><b>c) Correctness</b> <b>(VVS, §§ 389-393)</b></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/ /CPA-DD/ /HES/ /IM/</p>	<p><input checked="" type="checkbox"/> Correct      <input type="checkbox"/> Not correct (initial assessment)</p> <p><i>Description:</i></p> <p>The POF is surveyed and calculated at 90/10 and updated once the stove installation form has been submitted via the android system in credit tracker platform. During the tracker inputting process, the stove installation and monitoring records from XaC bank technician is cross checked. The inaccuracy is observed to be low.</p> <p><i>Verifier's action:</i></p> <p>The data flow of POF was checked by verification team. Credit tracker system verification and comparison between the result during onsite observation and documents review.</p> <p><i>Conclusion:</i></p> <p>The parameter information is according to registered CPA-DD.</p>	ok	OK
<b>C. C<sub>y,new,CEP-I</sub></b>		<b>C<sub>y,new,CEP-I</sub> represents the quantity of coal used in the project scenario for CEP-I installation, weighted average if multiple clusters of CEP, for target groups in Ger Area homes.</b>		
<p><b>a) Measurement / Determination method</b> <b>(VVS, §§ 389-393)</b></p>	<p>/MR/ /CPA-DD/</p>	<p><i>Description:</i></p> <p>The quantity of coal used is determined for the following 6 sample frames for the applied monitoring period as follows:</p>	<p>CAR G3 CAR</p>	OK

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Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<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>/MT/ /ANNEX-1/ /XLS/ /HES/</p>	<ul style="list-style-type: none"> <li>• Frame 1: Stove in house dwelling type, located in Songinokhairkhan district</li> <li>• Frame 2: Stove in house dwelling type, located in Bayangol district</li> <li>• Frame 3: Stove in house dwelling type, located in other district</li> <li>• Frame 4: Stove in ger dwelling type, located in Songinokhairkhan district</li> <li>• Frame 5: Stove in ger dwelling type, located in Bayangol district</li> <li>• Frame 6: Stove in ger dwelling type, located in other district</li> </ul> <p>The value is derived from a 3<sup>rd</sup> party survey report. i.e. Household Energy Survey (HES)<sup>/HES/</sup> (Household Energy Survey Data Analysis) report. The survey has been carried out by using “simple random sampling” and taking dwelling type and the level of precision of 90/10 into account.</p> <p><i>Verifier’s action:</i></p> <p>The sampling plan has been cross checked by verification team according to EB sampling guideline and applied methodology.</p> <p>The coal consumption has been also verified by means of on-site visit and interview (sample based) and assessment of House Hold Energy Survey Analysis sheet.</p> <p>The researcher from this 3rd party has been interviewed, w.r.t. the design and implementation of sampling plan, the independence and competence of survey implementer</p> <p><i>Conclusion:</i></p> <p>The parameter is in accordance with the registered monitoring plan of the CPA-DD and the applied methodology.</p>	G4	



**CDM-PoA-VCR-FORM**

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.										
		However, during course of verification CAR G3 and CAR G4 are raised and closed out successfully.												
<b>b) Accuracy and QA/QC Procedure (VVS, §§ 394-400)</b>  <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>  <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>  <i>Include calibration dates and information in validity of the installed monitoring equipment in the table in Annex 2.</i>	/MR/  /HES/	<i>Description:</i>  The value of this parameter is calculated based on the derived value from a survey report <sup>/HSE/</sup> , which is carried out by using of “simple random sampling” and taking dwelling type and the level of precision of 90/10 into account.  <i>Verifier’s action:</i>  The sampling plan has been cross checked by verification team according to EB sampling guideline and applied methodology.  The coal consumption has been also verified by means of on-site visit and interview (sample based).  The senior researcher from this 3rd party has been interviewed, w.r.t. the design and implementation of sampling plan, the independence and competence of survey implementer.  <i>Conclusion:</i>  There are no inconsistencies in the data reported for the parameter.	<del>CAR G3</del>  <del>CAR G4G3</del>	OK										
<b>c) Correctness (VVS, §§ 389-393)</b>  <i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i>  <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>  <i>In case of mistakes / deviations pl. provide details</i>	/MR/  /CPA/  /HES/  /IM/	<input checked="" type="checkbox"/> Correct <input type="checkbox"/> Not correct (initial assessment)  <i>Description:</i>  The sampling plan has been cross checked by verification team according to EB sampling guideline and applied methodology.  The <b>C<sub>y,new,CEP-i</sub></b> is calculated as : <table><tr><td>1. House-Song.</td><td>3.36</td></tr><tr><td>2. House-Bayan.</td><td>3.26</td></tr><tr><td>3. House-Other</td><td>3.31</td></tr><tr><td>4. Ger-Song.</td><td>3.07</td></tr><tr><td>5. Ger-Bayan.</td><td>2.78</td></tr></table>	1. House-Song.	3.36	2. House-Bayan.	3.26	3. House-Other	3.31	4. Ger-Song.	3.07	5. Ger-Bayan.	2.78	<del>CAR G3</del>  <del>CAR G4</del>	OK
1. House-Song.	3.36													
2. House-Bayan.	3.26													
3. House-Other	3.31													
4. Ger-Song.	3.07													
5. Ger-Bayan.	2.78													

**CDM-PoA-VCR-FORM**

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>and descriptions of the CARs raised.</i>		<p>6. Ger-Other 2.92</p> <p>For 2015-16 heating season</p> <p>1. House-Song. 3.77</p> <p>2. House-Bayan. 3.23</p> <p>3. House-Other 3.50</p> <p>4. Ger-Song. 3.31</p> <p>5. Ger-Bayan. 3.33</p> <p>6. Ger-Other 3.18</p> <p><i>Verifier's action:</i></p> <p>The sampling plan has been cross checked by verification team according to EB sampling guideline and applied methodology.</p> <p>The coal consumption has been also verified by means of on-site visit and interview (sample based) and value presented in MR are cross verified from HES Analysis sheet. The calculation of <math>C_{y,new,CEP-i}</math> was reviewed by verification team.</p> <p><i>Conclusion:</i></p> <p>It is concluded by means of onsite inspection and document review the data reported in the MR is correctly.</p>		
<b>D. <math>C_{y,old,CEP-i}</math></b>		<b>the quantity of coal in the baseline scenario in tonnes during year y for CEP-installation cluster (installation cluster (i) may represent baseline for single or multiple CEP installations, thus addressing cross-effects).</b>		
<p><b>a) Measurement / Determination method (VVS, §§ 389-393)</b></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>/MR/</p> <p>/CPA-DD/</p> <p>/AMS/</p> <p>/HES/</p>	<p><i>Description:</i></p> <p>The quantity of coal used is determined for the 6 sampling frames for this monitoring period:</p> <ul style="list-style-type: none"> <li>Frame 1: Stove in house dwelling type, located in Songinokhairkhan district</li> <li>Frame 2: Stove in house dwelling type, located in Bayangol district</li> </ul>	CAR G4	OK

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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>		<ul style="list-style-type: none"> <li>• Frame 3: Stove in house dwelling type, located in other district</li> <li>• Frame 4: Stove in ger dwelling type, located in Songinokhairkhan district</li> <li>• Frame 5: Stove in ger dwelling type, located in Bayangol district</li> <li>• Frame 6: Stove in ger dwelling type, located in other district</li> </ul> <p>The value is derived from a 3<sup>rd</sup> party survey report. i.e. Household Energy Survey (HES) (Household Energy Survey Data Analysis) report. The survey has been carried out by using of "simple random sampling" and taking dwelling type and the level of precision of 90/10 into account.</p> <p><i>Verifier's action:</i></p> <p>The sampling plan has been cross checked by verification team according to EB sampling guideline and applied methodology as well as registered PoA DD.</p> <p>The coal consumption has been also verified by means of on-site visit and interview (sample based).</p> <p><i>Conclusion:</i></p> <p>The parameter is in accordance with the registered monitoring plan of the CPA-DD and the applied methodology.</p> <p>However, during course of verification CAR G4 is raised and closed successfully.</p>		
<p><b>b) Accuracy and QA/QC Procedure</b> <b>(VVS, §§ 394-400)</b></p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for</i></p>	<p>/MR/ /CPA/ /PoA-DD/</p>	<p><i>Description:</i></p> <p>The value is derived from a 3<sup>rd</sup> party survey report, which is carried out by using "Baseline Fuel Consumption Regression Analysis" as approved at the time of PoA registration.</p>	CAR G4	OK

**CDM-PoA-VCR-FORM**

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.																						
<p><i>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>/AMS/ /HES/</p>	<p><i>Verifier’s action:</i></p> <p>The sampling plan has been cross checked by verification team according to EB sampling guideline and applied methodology.</p> <p>The coal consumption has been also verified by means of on-site visit and interview (sample based).</p> <p>The senior researcher from this 3rd party has been interviewed, w.r.t. the design and implementation of sampling plan, the independence and competence of survey implementer.</p> <p><i>Conclusion:</i></p> <p>There are no inconsistencies in the data reported for the parameter.</p>																								
<p><b>c) Correctness</b> <b>(VVS, §§ 389-393)</b></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/ /CPA/ /PoA-DD/ /AMS/ /HES/</p>	<p><input checked="" type="checkbox"/> Correct      <input type="checkbox"/> Not correct (initial assessment)</p> <p><i>Description:</i></p> <p>The sampling plan has been cross checked by verification team according to EB sampling guideline and applied methodology.</p> <p>The <b>C<sub>y,old,CEP-i</sub></b> is calculated as :</p> <table><tr><td>1. House-Song.</td><td>5.16</td></tr><tr><td>2. House-Bayan.</td><td>3.71</td></tr><tr><td>3. House-Other</td><td>4.80</td></tr><tr><td>4. Ger-Song.</td><td>4.72</td></tr><tr><td>5. Ger-Bayan.</td><td>3.27</td></tr><tr><td>6. Ger-Other</td><td>4.36</td></tr></table> <p>For 2015-16 heating season</p> <table><tr><td>1. House-Song.</td><td>5.39</td></tr><tr><td>2. House-Bayan.</td><td>3.95</td></tr><tr><td>3. House-Other</td><td>5.03</td></tr><tr><td>4. Ger-Song.</td><td>4.95</td></tr><tr><td>5. Ger-Bayan.</td><td>3.51</td></tr></table>	1. House-Song.	5.16	2. House-Bayan.	3.71	3. House-Other	4.80	4. Ger-Song.	4.72	5. Ger-Bayan.	3.27	6. Ger-Other	4.36	1. House-Song.	5.39	2. House-Bayan.	3.95	3. House-Other	5.03	4. Ger-Song.	4.95	5. Ger-Bayan.	3.51	OK	OK
1. House-Song.	5.16																									
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<b>Checklist Item</b> (incl. guidance for the verification team)	<b>Reference</b>	<b>Verification Team Comments</b> (Means and results of assessment)	<b>Draft Concl.</b>	<b>Final Concl.</b>
		<p>6. Ger-Other 4.59</p> <p><i>Verifier's action:</i></p> <p>The sampling plan has been cross checked by verification team according to EB sampling guideline and applied methodology.</p> <p>The coal consumption has been also verified by means of on-site visit and interview (sample based).</p> <p>The senior researcher from this 3rd party has been interviewed, w.r.t. the design and implementation of sampling plan, the independence and competence of survey implementer.</p> <p>The calculation of <math>C_{y,old,CEP-i}</math> was reviewed by verification team.</p> <p><i>Conclusion:</i></p> <p>It is concluded by means of onsite inspection and document review the data reported in the MR is correctly.</p>		
<b>E. <math>T_{y,s}</math> household stoves and/or insulation</b>		<b>Mean temperature in Celsius for year y and season s (Fall, Winter, Spring, Summer) for target groups in Ger Area homes</b>		
<p><b>a) Measurement / Determination method (VVS, §§ 389-393)</b></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</i></p>	<p>/MR/ /CPA-DD/ /AMS/ /PoA-DD/ /IM/ /NOAA/</p>	<p><i>Description:</i></p> <p>The value is derived from (US) National Climatic Data Centre Climatic Service Branch of the National Oceanic and Atmospheric Administration (NOAA).</p> <p>Values applied for season represent average of daily temperature measurement recorded by NOAA for every day during season, following seasonal definitions below:</p> <ul style="list-style-type: none"> <li>Autumn – August 2014, September 2014, October 2014</li> <li>Winter – November 2014, December 2014, January 2015</li> <li>Spring – February 2015, March 2015, April 2015</li> </ul>	<p>CAR G5</p>	<p>OK</p>

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Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>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>Verifier's action:</p> <p>The source has been cross checked by verification team according to registered PoA-DD and CPA-DD</p> <p>Conclusion:</p> <p>The parameter is in accordance with the registered monitoring plan of the CPA-DD and the applied methodology.</p> <p>However, during course of verification CAR G5 is raised and closed successfully.</p>		
<p><b>b) Accuracy and QA/QC Procedure</b> <b>(VVS, §§ 394-400)</b></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>/MR/ /CPA-DD/ /AMS/ /PoA-DD/ /IM/ /NOAA/</p>	<p>Description:</p> <p>The value is derived from a 3rd party report, which is carried out by (US) National Climatic Data Centre Climatic Service Branch of the National Oceanic and Atmospheric Administration (NOAA)</p> <p>Verifier's action:</p> <p>The resource has been cross checked by verification team according to registered PoA-DD and CPA-DD</p> <p>Conclusion:</p> <p>There are no inconsistencies in the data reported for the parameter.</p>	<p>CAR G5</p>	<p>OK</p>
<p><b>c) Correctness</b> <b>(VVS, §§ 389-393)</b></p> <p>Determine whether the value given in the monitoring report is correct or determined in a conservative</p>	<p>/MR/ /MR/ /CPA-DD/</p>	<p><input checked="" type="checkbox"/> Correct      <input type="checkbox"/> Not correct (initial assessment)</p> <p>Description:</p> <p>The source has been cross checked by verification team according to registered PoA-DD and CPA-DD</p>	<p>CAR G5</p>	<p>OK</p>

**CDM-PoA-VCR-FORM**

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.												
<p><i>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>/AMS/ /PoA-DD/ /IM/ /NOAA/</p>	<p>Value applied: For Heating Season 2014-15</p> <table><tr><td>T<sub>1,Autumn</sub></td><td>8.1</td></tr><tr><td>T<sub>1,Winter</sub></td><td>-17.0</td></tr><tr><td>T<sub>1,Spring</sub></td><td>-7.0</td></tr></table> <p>For Heating Season 2015-16</p> <table><tr><td>T<sub>1,Autumn</sub></td><td>9.4</td></tr><tr><td>T<sub>1,Winter</sub></td><td>-20.6</td></tr><tr><td>T<sub>1,Spring</sub></td><td>-7.2</td></tr></table> <p>Values applied for season represent average of daily temperature measurement recorded by NOAA for every day during season, following seasonal definitions below:</p> <ul style="list-style-type: none"><li>Autumn – August 2015, September 2015, October 2015</li><li>Winter – November 2015, December 2015, January 2016</li></ul> <p>Spring – February 2016, March 2016, April 2016</p> <p><i>Verifier’s action:</i></p> <p>The source has been cross checked by verification team according to registered PoA-DD and CPA-DD</p> <p><i>Conclusion:</i></p> <p>It is concluded by means of document review the data reported in the MR is correctly.</p>	T <sub>1,Autumn</sub>	8.1	T <sub>1,Winter</sub>	-17.0	T <sub>1,Spring</sub>	-7.0	T <sub>1,Autumn</sub>	9.4	T <sub>1,Winter</sub>	-20.6	T <sub>1,Spring</sub>	-7.2		
T <sub>1,Autumn</sub>	8.1															
T <sub>1,Winter</sub>	-17.0															
T <sub>1,Spring</sub>	-7.0															
T <sub>1,Autumn</sub>	9.4															
T <sub>1,Winter</sub>	-20.6															
T <sub>1,Spring</sub>	-7.2															
<b>F. WS<sub>y,s</sub></b> household stoves and/or insulation		<b>Mean wind speed in knots for year y and season s (Fall, Winter, Spring, Summer) for target groups in Ulaanbaatar</b>														
<b>a) Measurement / Determination method</b>	/MR/	<i>Description:</i>	CAR	OK												

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Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><b>(VVS, §§ 389-393)</b></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>/CPA-DD/ /AMS/ /HES/ /NOAA/</p>	<p>The value is derived from (US) National Climatic Data Centre Climatic Service Branch of the National Oceanic and Atmospheric Administration (NOAA).</p> <p>Values applied for season represent average of daily wind speed recorded by NOAA for every day during season, following seasonal definitions below:</p> <p><i>Verifier's action:</i></p> <p>The source has been cross checked by verification team according to registered PoA-DD and CPA-DD</p> <p><i>Conclusion:</i></p> <p>The parameter is in accordance with the registered monitoring plan of the CPA-DD and the applied methodology.</p> <p>However, during course of verification CAR G5 is raised and closed successfully.</p>	G5	
<p><b>b) Accuracy and QA/QC Procedure (VVS, §§ 394-400)</b></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>/MR/ /CPA-DD/ /AMS/ /HES/ /NOAA/</p>	<p><i>Description:</i></p> <p>The value is derived from a 3rd party report, which is carried out by (US) National Climatic Data Centre Climatic Service Branch of the National Oceanic and Atmospheric Administration (NOAA)</p> <p><i>Verifier's action:</i></p> <p>The resource has been cross checked by verification team according to registered PoA-DD and CPA-DD</p> <p><i>Conclusion:</i></p> <p>There are no inconsistencies in the data reported for the parameter.</p>	CAR G5	OK



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Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>Include calibration dates and information in validity of the installed monitoring equipment in the table in Annex 2.</i>				
<p><b>c) Correctness</b>  <b>(VVS, §§ 389-393)</b></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/  /CPA-DD/  /AMS/  /HES/  /NOAA/</p>	<p><input checked="" type="checkbox"/> Correct      <input type="checkbox"/> Not correct (initial assessment)</p> <p><i>Description:</i></p> <p>The source has been cross checked by verification team according to registered PoA-DD and CPA-DD</p> <p>Value applied:</p> <p>For Heating Season 2014-2015</p> <p>WS<sub>1,Autumn</sub> 5.4 knots  WS<sub>1,Winter</sub> 3.4 knots  WS<sub>1,Spring</sub> 5.4 knots</p> <p>Values applied for season represent average of daily wind speed measurement recorded by NOAA for every day during season, following seasonal definitions below:</p> <ul style="list-style-type: none"> <li>Autumn – August 2014, September 2014, October 2014</li> <li>Winter – November 2014, December 2014, January 2015</li> <li>Spring – February 2015, March 2015, April 2015</li> </ul> <p>For Heating Season 2015-2016</p> <p>WS<sub>1,Autumn</sub> 5.6 knots  WS<sub>1,Winter</sub> 2.6 knots  WS<sub>1,Spring</sub> 5.6 knots</p> <p>Values applied for season represent average of daily wind speed measurement recorded by NOAA for every day during season, following seasonal definitions below:</p>	CAR G5	OK

# CDM-PoA-VCR-FORM

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		<ul style="list-style-type: none"> <li>Autumn – August 2015, September 2015, October 2015</li> <li>Winter – November 2015, December 2015, January 2016</li> </ul> <p>Spring – February 2016, March 2016, April 2016</p> <p><i>Verifier's action:</i></p> <p>The source has been cross checked by verification team according to registered PoA-DD and CPA-DD</p> <p><i>Conclusion:</i></p> <p>It is concluded by means of document review the data reported in the MR is correctly applied.</p>		
<b>G. DW<sub>y,type</sub>, household stoves and/or insulation</b>		<b>Number of dwellings that are houses for target groups in Ger Area homes</b>		
<p><b>a) Measurement / Determination method (VVS, §§ 389-393)</b></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</i></p>	<p>/MR/ /CPA-DD/ /HES/ /AMS/ /Cre-T/ /DATA/ /XLS/</p>	<p><i>Description:</i></p> <p>The value is derived from tracker platform and 3rd party survey report.(Household Energy Survey (HES) report)</p> <p>1 or 0 stands for each household that used product and reported coal consumption in project scenario to calculate baseline coal consumption.</p> <p><i>Verifier's action:</i></p> <p>The resource has been cross checked by verification team according to HES report</p> <p><i>Conclusion:</i></p> <p>The parameter is in accordance with the registered monitoring plan of the CPA-DD and the applied methodology.</p>	OK	OK

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<b>Checklist Item</b> (incl. guidance for the verification team)	<b>Reference</b>	<b>Verification Team Comments</b> (Means and results of assessment)	<b>Draft Concl.</b>	<b>Final Concl.</b>
<i>plan of the PDD and the applied methodology.</i>				
<p><b>b) Accuracy and QA/QC Procedure</b> <b>(VVS, §§ 394-400)</b></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>/MR/ /HES/</p>	<p><i>Description:</i></p> <p>The value is derived from tracker platform and 3rd party survey report.(Household Energy Survey (HES) report)</p> <p><i>Verifier's action:</i></p> <p>The resource has been cross checked by verification team according to HES report</p> <p><i>Conclusion:</i></p> <p>There are no inconsistencies in the data reported for the parameter.</p>	OK	OK
<p><b>c) Correctness</b> <b>(VVS, §§ 389-393)</b></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/ /CPA1/ /EI3/ /EI6/</p>	<p><input checked="" type="checkbox"/> Correct      <input type="checkbox"/> Not correct (initial assessment)</p> <p><i>Description:</i></p> <p>The source has been cross checked by verification team according to registered HES report</p> <p>Value applied: 1 or 0 stands for each household that used product and reported coal consumption in project scenario to calculate baseline coal consumption.</p> <p><i>Verifier's action:</i></p> <p>The resource has been cross checked by verification team according to 3<sup>rd</sup> party report</p>	OK	OK

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Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		<p><i>Conclusion:</i></p> <p>It is concluded by means of document review the data reported in the MR is correctly applied.</p>		
<b>H. <math>\eta_{new}</math></b>		<b>Efficiency of the new efficient CEP</b>		
<p><b>a) Measurement / Determination method</b> <b>(VVS, §§ 389-393)</b></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-3/ /ANN-4/</p>	<p><i>Description:</i></p> <p>The efficiency of the new stove was tested by the Stove Emissions and Efficiency Testing (SEET) Laboratory in Ulaanbaatar Mongolia., which was developed with support from the Asian Development Bank and currently under management of the national Mongolian University of Science and Technology (MUST). Testing followed the protocol: "UJ SeTAR Centre Standard Operating Procedure: The Heterogenous Testing Procedure for Thermal Performance and Trace Gas Emissions."</p> <p><i>Verifier's action:</i></p> <p>The resource has been cross checked by verification team according to HES report</p> <p><i>Conclusion:</i></p> <p>The parameter is in accordance with the registered monitoring plan of the CPA-DD and the applied methodology.</p>	OK	OK
<p><b>b) Accuracy and QA/QC Procedure</b> <b>(VVS, §§ 394-400)</b></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</i></p>	<p>/IM01/ /POADD/ /AMS II.G/  /ANN-3/ /ANN-4/</p>	<p><i>Description:</i></p> <p>The value is derived from 3rd party report, i.e. the Stove Emissions and Efficiency Testing (SEET) Laboratory in Ulaanbaatar Mongolia.</p> <p><i>Verifier's action:</i></p> <p>The resource has been cross checked by verification team according to SEET report</p> <p><i>Conclusion:</i></p>	CAR G5	OK

**CDM-PoA-VCR-FORM**

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>made for calculating ERs.</i> <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> <i>Include calibration dates and information in validity of the installed monitoring equipment in the table in Annex 2.</i>		There are no inconsistencies in the data reported for the parameter.		
<b>c) Correctness</b> <b>(VVS, §§ 389-393)</b>  <i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i>  <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>  <i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i>	/IM01/ /POADD/ /AMS II.G/ /ANN-3/ /ANN-4/	<input checked="" type="checkbox"/> Correct <input type="checkbox"/> Not correct (initial assessment)  <i>Description:</i>  The source has been cross checked by verification team according to SEET report  Value applied for the different Stove Types:  Royal Single/Mini Dul      74.3% Royal Double/Golomt      75.8% Silver Turbo/Khas      77.0% Silver Mini/ Ulzii      76.2%  <i>Verifier´s action:</i>  The resource has been cross checked by verification team according to 3 <sup>rd</sup> party report  <i>Conclusion:</i>  It is concluded by means of document review the data reported in the MR is correctly applied.	OK	OK

## 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
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<input type="checkbox"/> No <input type="checkbox"/> Yes	From: To:
-	-	-	-	-	-	-	-	<input type="checkbox"/> No <input type="checkbox"/> Yes	From: To: