Verification and certification report form for CDM programme of activities

(Version 04.0)

Complete this form in accordance with the instructions attached at the end of this form.

BASIC INFORMATION			
Title and UNFCCC reference number of the programme of activities (PoA)	· Title: Clean Energy Program Supported by Republic of Korea · Ref. no.: 10415		
Version number(s) of the PoA-DD(s) to which this report applies	· Version 2.0		
Version number of the verification and certification report	· Version 2.1		
Completion date of the verification and certification report	26/07/2021		
Monitoring period number and duration of this morning period	· Monitoring period number: 3rd · Duration: 13/09/2019~22/06/2020		
Number and version number of the monitoring report to which this report applies	· Number: 1 · Version number: 11.1		
Coordinating/managing entity (CME)	ECOEYE Co., LTD		
Host Parties	Host Parties of the PoA	Is this a host Party to a CPA covered in this report? (yes/no)	
	The Republic of the Union of Myanmar	Yes	
Applied methodologies and standardized baselines	· Energy efficiency measures in thermal applications of non renewable biomass AMS-II.G. (version 08.0) · No standardized baseline(s) applied		
Mandatory sectoral scopes	Energy Demand (sectoral scope 3)		
Conditional sectoral scopes, if applicable	No conditional sectoral scope(s) linked to the applied methodology		
Estimated amount of GHG emission reductions or GHG removals for this monitoring period in the included CPAs covered in this report	484,380 tCO_2e		
Certified amount of GHG emission reductions or GHG removals for this monitoring period for the included CPAs covered in this report	Amount before 1 January 2013	Amount from 1 January 2013 until 31 December 2020	Amount from 1 January 2021
	0	446,995 tCO_2e	0
Name and UNFCCC reference number of the DOE	· Name: Korean Foundation for Quality (KFQ) · Reference number: E-0025		
Name, position and signature of the approver of the verification and certification report	Yu Shim JEONG Managing Director of Energy·Climate Change Assessment Division		

	Y S JEONG

SECTION A. Executive summary

Korean Foundation for Quality (KFQ) has performed periodic verification of the registered CDM Programme of activities (PoA) titled “Clean Energy Program Supported by Republic of Korea” (ref. no. 10415) covering Component Project Activity (CPA) “Clean Energy Program Supported by Republic of Korea CPA MM02” (UNFCCC Ref. no. 10415-P1-0002-CP1) in Myanmar for the period from 13/09/2019 to 22/06/2020. This report contains the findings from the verification and a certification statement for the certified emission reductions.

Verification objective
Verification is the periodic, thorough and independent assessment and ex post determination by a Designated Operational Entity (DOE) of the monitored reductions in greenhouse gas (GHG) emissions that have occurred as a result of the registered CDM PoA and included component project activities (CPAs) during a defined monitoring period. Certification is the written assurance by a DOE that, during a specific period in time, a CDM PoA achieved the emission reductions as verified.

The objective of this verification was to verify and certify emission reductions reported for the PoA “Clean Energy Program Supported by Republic of Korea” and the included CPA “Clean Energy Program Supported by Republic of Korea CPA MM02” for the period from 13/09/2019 to 22/06/2020 in accordance with paragraph 62 of CDM modalities and procedures.

Verification scope
The scope of the verification is to verify that:

- The CPA has been implemented and operated in accordance with the registered programme of activities design document (PoA-DD) and component project activity design document (CPA-DD) and that all physical features (technology, project equipment, and monitoring and metering equipment) of the CPA are in place;
- The monitoring report (MR) and other supporting documents provided are complete in accordance with latest applicable version of the completeness checklist for requests for issuance of CERs and verifiable and in accordance with applicable CDM requirements;
- The monitoring plan complies with the applied methodology(ies) and, if applicable, standardized baseline(s);
- The actual monitoring systems and procedures comply with the monitoring systems and procedures described in the monitoring plan and the approved methodology including applicable tools and any guidance provided by the CDM Executive Board regarding deviations from the provisions of a registered plan and/or methodology;
- Data is recorded and stored as per the applied monitoring methodology(ies);
- The calculation of GHG emission reductions correctly supports the emission reductions being claimed;

Furthermore, it was KFQ’s objective to identify any concerns related to the conformity of the actual project activity and its operation with the registered PoA-DD and included CPA-DD(s) and determine whether any deviation or proposed or actual changes in the implementation or operation of the registered CDM PoA and included CPA(s) comply with the requirements of the CDM project standard for programmes of activities.

The verification shall ensure that reported emission reductions are complete and accurate in order to be certified. The verification is incorporating both quantitative and qualitative information on emission reductions.

Verification process
KFQ has made publicly available the MR received from the coordinating/managing entity (CME). Only verification activities after the publication of the MR on the UNFCCC CDM website have been used as a basis for conclusion of verification. The verification process includes desk review of the monitoring report published (and any updated versions, if available), emission reduction calculation

spreadsheets and other supporting documents and data.

Furthermore, interviews with those involved in project management and operations were conducted. On-site inspection was not conducted due to the Coronavirus disease (COVID-19) pandemic thus online interviews via zoom application were held with CPA implementers and project participants as alternative means for the verification. This is followed by preparation of draft verification report summarizing desk review and the interview findings (i.e., CARs, CLs, and FARs). Upon successful closing of the CARs, CLs and FARs raised (if any), the final verification report is prepared. The final report then undergoes a technical review and final approval according to KFQ's internal quality assurance procedures.

The data presented in the monitoring report were assessed by review of the detailed project documentation and electricity generation records, as well as by interviews with CME and CPA implementer, and observation of collection of measurements, observation of established monitoring and reporting practices and assessment of the reliability of monitoring equipment. This has enabled the verification team to assess the accuracy and completeness of reported monitoring results, as well as to verify the correct application of the approved monitoring methodology. Furthermore, this has enabled the verification team to assess and determine that the implementation and operation of PoA and included CPA(s) as well as the steps taken to report emission reductions in compliance with the CDM criteria and relevant guidance provided by the Board.

In addition, all parameters, as required (and as applicable) by the monitoring methodology as well as the monitoring plan and the management system were assessed during the online interviews.

Description of the PoA

Project Parties	Myanmar (Host)
Project participants	ECOEYE Co., LTD
Title of PoA	Clean Energy Program Supported by Republic of Korea
UNFCCC reference number	10415
Applied methodology	AMS-II.G. (Version 8.0)
Coordinating/managing entity	ECOEYE Co., LTD
Registration Date	28/08/2018
PoA duration	13/04/2017 to 12/04/2045
Registered PoA-DD	Version 2.0 of 25/09/2018
Period verified in this verification	13/09/2019 to 22/06/2020

Description of the CPAs included in this verification report

CPA implementer	ECOEYE Co., LTD
Title of CPA	Clean Energy Program Supported by Republic of Korea CPA MM02
UNFCCC reference number	10415-P1-0002-CP1
Applied methodology	AMS-II.G. (Version 8.0)
Location	Physical/ Geographical boundary of the CPA is The Republic of The Union of Myanmar, Latitude: 19° 04' 24.47" N Longitude: 96° 40' 15.74" E
Inclusion date	27/12/2018
Crediting Period	10/01/2019 to 09/01/2029 (Fixed)
Included CPA-DD	Version 3.0 of 26/12/2018

The CPA is the implementation of improved cooking stoves (hereinafter "ICS") in Myanmar. The ICS disseminated through this programme has replaced the prevailing inefficient three-stone fires or equivalent with stoves, which combust wood more efficiently, and improve thermal transfer to

pots, hence saving fuel and lowering greenhouse gas (hereinafter "GHG") emissions. Applicable models of ICS for this monitoring period are S 26-13 and S 32-13. An ICS has an enclosure for the fire to reduce the loss of radiant heat and protect it against the wind. It increases heat transfer to the cooking pot by guiding upward flow of the flue gases. ICS burns fuel more cleanly and efficiently reducing fuel consumption and GHG emissions, easing pressure on forest resources and reducing indoor air pollution.

Conclusion

KFQ has performed the 3rd verification of the emission reductions reported for the registered CDM PoA "Clean Energy Program Supported by Republic of Korea" and the included CPA "Clean Energy Program Supported by Republic of Korea CPA MM02" for the period from 13/09/2019 to 22/06/2020.

The verification of the emission reductions has assessed all factors and issues that constitute the basis for emission reductions from the CPA of the PoA. All relevant records of data relating to implementation and operation of the CDM PoA and the included CPA has been examined and verified for the reporting period.

The verification team has identified the key reporting risks during its preparations and used the assessment to determine to which extent the project operator's control systems were adequate for mitigation of these key reporting risks. In addition, other areas that can have an impact on reported emission reductions have also undergone detailed audit testing.

KFQ also confirms that the GHG emission reductions are calculated without material misstatements. Our opinion refers to the project's GHG emissions and resulting GHG emission reductions reported, both determined using the valid and registered project's baseline, its monitoring plan in the included CPA-DD and its associated documents.

The implementation of the PoA and the included CPA resulted in 446,995 tCO_2e of emission reductions during the monitoring period from 13/09/2019 to 22/06/2020.

In our opinion, the GHG emission reductions reported for the PoA and the included CPA in the MR (Version 11.1) are fairly stated. The GHG emission reductions were calculated correctly on the basis of the approved monitoring methodology AMS-II.G. (Version 8.0) and the monitoring plan contained in the PoA-DD (Version 02) and the CPA-DD (Version 3.0 for 10415-P1-0002-CP1).

KFQ is able to certify that the emission reductions from the CDM PoA "Clean Energy Program Supported by Republic of Korea CPA MM02" during the period from 13/09/2019 to 22/06/2020 amount to 446,995 tCO_2e.

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/document review	On-site inspection	Interview(s)	Verification findings
1.	Team Leader(*)	IR	PARK	Su Hyun	KFQ	√	-	√	√
2.	Team Member (*)	IR	CHO	Hyun Cheol	KFQ	√	-	-	√
3.	Trainee	IR	YANG	Gee Hyun	KFQ	√	-	√	√

4.	Local expert	EI	-	KHIN SAN WIN	KFQ	-	-	√	-

(*) means a personal with technical expertise in technical area 3.1.

Please refer to Appendix 2 below for demonstration of how the team meets the competence required for the validation.

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

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer	IR	LEE	Mi Jung	KFQ
2.	Approver	IR	JEONG	Yu Shim	KFQ

B.3. Consideration of materiality in planning the verification

No.	Risk that could lead to material errors, omissions or misstatements	Assessment of the risk		Response to the risk in the verification plan and/or sampling plan
		Risk level	Justification	
1	*Number of Monitoring parameters*	*L*	*Not large number of monitoring parameters.*	*The KFQ verification team included two verifiers in total to cover/review all monitoring parameters in a complete and detailed manner. In the previous verification, there was no significant change on verified ER compared to ER in Monitoring report (Ver.01)*
2	*Error rate in Monitoring report*	*L*	*Human error, mistakes etc. are occurred between raw data and the monitoring report.*	*In response of that risk, the KFQ verification team focuses on systematic consistency and error checks and crosscheck with the evidences.*
3	*Familiarity with Monitoring system*	*L*	*This is the 3rd monitoring period. Maturity of monitoring system is enough to comply with the monitoring plan and apply to the methodologies.*	*In response to that risk, the KFQ verification team checks sampling and survey implementation and instruments calibration inspected by 3rd party calibration organization. Moreover, we review training plan and records of the monitoring staffs to ensure the quality of data measuring and recording.*
4	*QA/QC*	*L*	*QA/QC system is not implemented according to the monitoring plan.*	*Focus on crosschecking between raw data from database and hardcopy of survey result and references and check with monitoring procedure of the CME.*
5	*Data flow*	*M*	*Transferred to the spread sheet manually.*	*Crosscheck raw data with spread sheet on a random sampling basis extent to ensure the functioning of transferring procedure.*
6	*Calculation*	*M*	*Calculation is performed in excel spreadsheet applying formulae.* *However, the formulae are complicatedly linked in*	*Crosscheck the all formulae in spreadsheet with equations from applied methodology and methodological regulatory documents.*

			various the spreadsheets.	

KFQ's verification plan draws on an understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate them. KFQ planned the verification by obtaining evidence and other information and explanations that KFQ considers necessary to give reasonable assurance on the reported GHG emission reductions on the basis of risk level identified and materiality concept in accordance with "Guideline on the application of materiality in verifications" (version 02.0).

SECTION C. Application of materiality in conducting the verification

C.1. Consideration of materiality in conducting the verification

During the course of the verification, one detected finding has influenced on the amount of emission reductions, but occurred in isolation and is immaterial. As the finding could be considered as simple error, not systematic reoccurring error, the verification team decided that no additional audit procedures need to be conducted in order to reach a reasonable level of assurance and that the claimed emission reductions in the MR are free from material error, omission or misstatement. Accordingly, verification and sampling plan were not revised.

SECTION D. Means of verification

D.1. Desk/document review

KFQ's verification is based on the monitoring documentation provided by CME, especially the MR (Version 1.0 dated 05/11/2020, Version 10.0 dated 25/05/2021 and Version 11.1 dated 23/07/2021) and the emission reduction calculation spreadsheet. Furthermore, the registered PoA-DD, CPA-DD and validation report were reviewed as well as the applied baseline and monitoring methodology and any other information and references relevant to the project activity's emission reductions (e.g. IPCC reports, etc.). A complete list of all documents reviewed is shown in Appendix 3 of this verification report.

KFQ's verification process takes into consideration all the CDM rules and guidance applicable to the programme activity, e.g. CDM validation and verification standard for programme of activities (VVS for PoA), CDM project standard for programmes of activities (PS for PoA), CDM project cycle procedure for programmes of activities (PCP for PoA), checklist for requests for issuance for programme of activities, relevant decisions, clarifications and guidance from the CMP and the Board.

During the desk review, KFQ has applied standard auditing techniques to assess the quality of information provided. The following activities were performed:

- Verify the compliance of the MR with the guidance for completing the monitoring report form;
- Verify the completeness of the data and the information presented;
- Check the compliance of the MR with respect to the monitoring plan in the registered PoA-DD and the CPA-DDs and verify that the applied methodology was carried out. Particular attention to coverage of all monitoring parameters, the frequency of measurements, the quality of the measuring equipment including calibration requirements, and the quality assurance and quality control procedures was paid;
- Review the calculations and assumptions used to obtain the GHG data and emission reductions; and
- Evaluate the data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.

D.2. On-site inspection

On-site inspection was not conducted due to the Coronavirus disease (COVID-19) pandemic. Site visit for this verification could not be postponed because it is not certain when the pandemic will be mitigated and delaying the site visit affects significantly with respect to project implementation schedule including CERs delivery which agreed between relevant stakeholders of the PoA. Face to face meeting and online interview via Zoom application with CME were held as alternative means for the verification on 22/02/2021. During the interview, the verification team checked the implementation and operation of management system including data archiving, training for surveyors and distributers in Myanmar. Further, the local expert of verification team conducted telephone interviews with representative of sample households from 26/02/2021 to 20/03/2021 to conduct DOE survey to check the acceptability of the data for each record in the CME's sample record and to determine whether the CME's sample records meet the requirements. Through the interviews with and document review, the verification team checked the issues that had to check directly during on-site inspection and collected evidences from the interviews are credible and sufficient for the purpose for this verification.

Duration of on-site inspection: N/A				
No.	**Activity performed on-site**	**Site location**	**Date**	**Team member**
-	N/A	-	-	-

D.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Sangsun	Ha	Ecoeye Co., Ltd.	22/02/2021	General Support	SuHyun Park GeeHyun Yang
2	Rai	Rahul	Ecoeye Co., Ltd.	22/02/2021	Monitoring Report, Facilities, Sampling and ER, Calculation, QA/QC	SuHyun Park GeeHyun Yang
3	Jinah	Choi	Ecoeye Co., Ltd.	22/02/2021	General Support, QA/QC, CDM coordination	SuHyun Park GeeHyun Yang
4	Sohyeon	Park	Ecoeye Co., Ltd.	22/02/2021	General Support, QA/QC, CDM coordination	SuHyun Park GeeHyun Yang
5	-	Ma Thin Thin Aye	End user (Household representative)	26/02/2021	DOE Field Survey of ICS Users	KHIN SAN WIN
6	-	Daw Tin Tin Htay	End user (Household representative)	26/02/2021	DOE Field Survey of ICS Users	KHIN SAN WIN
7	-	U Saw Min Htoo		26/02/2021 08/03/2021 20/03/2021		KHIN SAN WIN
8	-	Daw Kathi Soe		02/03/2021		KHIN SAN WIN
9	-	Daw Myint Kyi		02/03/2021 20/03/2021		KHIN SAN WIN
10	-	Daw Thein Myint		02/03/2021		KHIN SAN WIN

11	-	U Hla Win		04/03/2021		KHIN SAN WIN
12	-	Daw Mar Mar Lwin		04/03/2021 08/03/2021		KHIN SAN WIN
13	-	Daw Ei Thingi Soe		02/03/2021		KHIN SAN WIN
14	-	U Ni		04/03/2021		KHIN SAN WIN
15	-	Daw Kyi Nyunt		04/03/2021 08/03/2021		KHIN SAN WIN
16	-	Ma Aye Aye Moe		04/03/2021		KHIN SAN WIN
17	-	Ma Moe Moe		04/03/2021		KHIN SAN WIN
18	-	Ko Thar Tue		04/03/2021 08/03/2021		KHIN SAN WIN

D.4. Sampling approach

Sampling approach by the CME was applied for monitoring survey for 2nd monitoring period but no monitoring survey for 3rd monitoring period has been conducted due to the Covid-19 pandemic thus, CME decided to propose alternative monitoring arrangement for this deviated 3rd monitoring period (refer to section E.3.2.1. and E.3.4.3 for details).

The verification team has used acceptance sampling for remote surveys as part of this verification in accordance with Para. 28 of "Sampling and surveys for CDM project activities and programmes of activities, version 09.0". In order to determine the sample size, the verification team specified Acceptable quality level (AQL)[1] and Unacceptable quality level (UQL)[2] using its own professional judgement as 1.0% and 20% respectively. As the PoA is located in a least developed country, Myanmar, the verification team has chosen a different value for the consumer risk[3] and producer risk[4] as 20% and 5% respectively. Finally, sample size (n) is determined as 14 using Table 2 in the "Sampling and surveys for CDM project activities and programmes of activities, version 09.0" and acceptance number (c) is 1.

The verification team took a random samples of the CME's sample records and check, using its own professional judgement, the acceptability of the data for each record for operating rate of improved cookstove for $N_{y,i,j}$ and continued-use rate of displaced traditional cookstove for μ_y. The verification team verified the 14 randomly selected samples out of CME's 130 samples during phone survey by local expert. It was observed that 13 out of 14 sampled stoves were in operating thus no discrepant record were observed, i.e., the result of discrepancy is within the specified limits (less than or equal to c=1). Therefore, the CME's set of records for $N_{y,i,j}$ is accepted.

The verification team also verified the 14 randomly selected samples out of the CME's records in respect of adjustment to account for any continuous use of pre-project devices during the year (μ_y). It was concluded that 1 out of 14 ICS user found to be having discrepancy with CME's records i.e., the result of discrepancy is within the specified limits (less than or equal to c=1). μ_y for 14 randomly selected samples was calculated as 0.85, which is higher than the value from CME's sample. CME has considered value as 0.84 for project devices operating during MP02 (μ_{mp02}) and 0.78 for project devices distributed and operating during MP03(μ_{mp02+}), which are conservative compared to DOE's survey results. Therefore, verification team concluded that the CME's set of record for the

[1] The proportion of acceptable discrepancies between the project participants' or the coordinating/managing entity's sample records and the DOE sample records (i.e. DOE field/on-site inspection results).

[2] The proportion of unacceptable discrepancies between the project participants' or the coordinating/managing entity's sample records and the DOE sample records.

[3] Chance that the DOE will wrongly accept the project participants' or the coordinating/managing entity's records (i.e. accept a set of records which is unacceptable)

[4] Chance that the DOE will wrongly reject the project participants' or the coordinating/managing entity's records (i.e. reject a set of records of acceptable quality)

adjustment to account for any continuous use of pre-project devices during the year (μ_y) is acceptable.

Based on the number of records where there is agreement, the verification team concluded that CME's set of records is acceptable and met the relevant requirement of the "Sampling and surveys for CDM project activities and programmes of activities".

The verification team did not conduct DOE remote survey for ICS efficiency as replaced with reviewing of certifications for the initial efficiency and calculation for the linear loss in efficiency. The verification team verified certification for the efficiency of all ICS types found them met the requirements in the applied methodologies.

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

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
General	-	-	-
Compliance of the monitoring report with the monitoring report form	-	1	-
Remaining forward action requests from validation and/or previous verifications	-	-	1
CPAs considered for verification and covered in this report	-	-	-
Programme of activities	-	-	-
Compliance of the programme implementation with the registered PoA-DD	-	-	-
Implementation and operation of the management system	-	-	-
Post-registration changes	-	-	-
• Corrections	-	-	-
• Inclusion of a monitoring plan	-	-	-
• Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents[5]	-	-	-
• Changes to the programme design	-	-	-
• Addition of CPA inclusion template	-	-	-
• Change of coordinating/managing entity	-	-	-
• Changes specific to afforestation and reforestation activities	-	-	-
Component project activities	-	-	-
Compliance of the CPA implementation with the included CPA design document	1	-	-
Post-registration changes	-	-	-
• Temporary deviations from registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents	-	-	-
• Corrections	-	-	-
• Changes to the start date-of the crediting period	-	-	-
• Inclusion of a monitoring plan	-	-	-
• Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents	-	-	-
• Changes to the project design	-	-	-

[5] Other standards, methodologies, methodological tools and guidelines (to be) applied in accordance with the applied(selected) methodologies are collectively referred to as the other (applied) methodological regulatory documents).

• Changes specific to afforestation and reforestation activities	-	-	-
Compliance of the registered monitoring plan with applied methodologies and standardized baselines	-	-	-
Compliance of monitoring activities with the registered monitoring plan	-	-	-
• Data and parameters fixed ex ante or at renewal of crediting period	-	-	-
• Data and parameters monitored	2	2	-
• Implementation of sampling plan	-	-	-
Compliance with the calibration frequency requirements for measuring instruments	1	-	-
Assessment of data and calculation of emission reductions or net removals	-	-	-
• Calculation of baseline GHG emissions or baseline net GHG removals by sinks	-	-	-
• Calculation of project GHG emissions or actual net GHG removals by sinks	-	-	-
• Calculation of leakage GHG emissions	-	-	-
• Summary of calculation of GHG emission reductions or net GHG removals by sinks	-	-	-
• Comparison of actual GHG emission reductions or net GHG removals by sinks with estimates in included CPA	-	-	-
• Remarks on difference from estimated value in included CPA	-	-	-
Assessment of reported sustainable development co-benefits	-	-	-
Global stakeholder consultation	-	-	-
Others (please specify)	-	-	-
Total	4	3	1

The objective of this phase of the verification was to resolve any issues which needed to be clarified prior to KFQ's conclusion that:

- The project activity has been implemented and operated in accordance with the registered or any approved revised PoA-DD and CPA-DD;
- The monitoring plan complies with the monitoring methodology and the actual monitoring complies with the monitoring plan including any guidance provided by the Board regarding deviations from the provisions of a registered/revised plan and/or methodology; and
- The data and calculation of GHG emission reductions are correct.

A corrective action request (CAR) is issued, where:

- Non-conformities with the monitoring plan or methodology are found in monitoring and reporting has not been sufficiently documented by the CME, or if the evidence provided to prove conformity is insufficient;
- Modifications to the implementation, operation and monitoring of the registered CPA has not been sufficiently documented by the CME;
- Mistakes have been made in applying assumptions, data or calculations of emission reductions which will impair the estimate of emission reductions; or
- Issues identified in a FAR during validation or previous verification(s) to be verified during next verification have not been resolved by the CME.

A clarification request (CL) shall be raised if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

A forward action request (FAR) is issued for actions if the monitoring and reporting require attention and/or adjustment for the next monitoring period.

4 CLs and 3 CARs were raised for this monitoring period, which were closed successfully after CME submitted MR (version 11.1).

SECTION E. Verification findings

E.1. General

E.1.1. Compliance of the monitoring report with the monitoring report form

Means of verification	KFQ has checked the MR provided by the CME against the valid version of the applicable monitoring report form in order to determine, whether the MR is in compliance with it.
Findings	The CME submitted the Version 1.0 and Version 10.0 of MR to DOE applying Version 03.0 of the PoA Monitoring Report Form (PoA-MR-FORM). The Final MR (Version 11.1) was made applying Version 04.0 of the MR form thus there are no deviations between the final MR and the latest MR form (Version 04.0). However, regarding correction and permanent changes to the PoA, CME is required to indicate whether the PRC has been approved by the Board as applicable from the period prior to this monitoring period or from this monitoring period as per the instructions for completing MR form but the information was not clearly included in the MR (version 1.0). In Addition, CME temporarily deviated the registered monitoring plan in the CPA-DD during this monitoring period but the MR (version 01.0) did not clearly indicate whether there are temporary deviations from the monitoring plans during this monitoring period **(Refer to the Appendix 4 / Table 3 / CAR ID 01).** Regarding this CAR, CME added sentences in the sections of revised MR (Version 08.0) for clearer description. After CME submitted the updated MR, the verification team confirmed that PRC approved on 17/12/2018 (Reference no. 10415-P1-0002-CP1) and temporary deviations are properly mentioned in B.2 and C.2 of updated MR. The verification team confirmed that the submitted MR (version 1.0 and version 10.0) are following the valid monitoring report form (version 03.0) and the instructions therein. Further, the verification confirmed that above are properly transferred to the final MR(Version 11.1) using the latest monitoring report form (Version 04.0).
Conclusion	The raised CAR (ID 01) has been completely resolved. The verification team concludes that the final MR (Version 11.1) is compliance with the latest monitoring report form (Version 04.0) and the instructions therein.

E.1.2. Remaining forward action requests from validation and/or previous verifications

This is 3rd verification of the PoA and the verification team found that there is one remaining FAR pending from validation and previous verifications (1st and 2nd) to be considered during this monitoring period (Refer to FAR ID 01 in Appendix 4 of this verification report). However, as single CPA (10415-P1-0002-CP1) is considered for this verification only, this FAR from previous verifications is not relevant to this verification and it is being carry forwarded to next verification as FAR ID 02 mentioned in Appendix 4.

E.1.3. CPAs considered for verification and covered in this report[6]

Title and UNFCCC reference number of the CPA included in the PoA as of the end of this monitoring period	Is the CPA considered for this verification? (yes/no)	The date when the CPA was included	Version of the PoA-DD	Confirmation that a request for issuance including the CPA has been published for the previous monitoring period (Y/N)
CPA MM 01 (Ref.no. 10415-P1-0001-CP1)	No	28/08/2018 (Excluded on 03/01/2019)	2.0	N
Clean Energy Program Supported by Republic of Korea CPA MM 02 (Ref.no. 10415-P1-0002-CP1)	Yes	27/12/2018	2.0	Y

E.2. Programme of activities

E.2.1. Compliance of the programme implementation with the registered programme design document

Means of verification	The verification team has checked the conformity of the actual PoA and its operation with the registered PoA-DD and determined whether the implementation and operation of the included CPA has been conducted in accordance with the description contained in the registered PoA-DD through document review, interviews with the CME. On-site inspection was not conducted but online video interviews were conducted with CME as alternative means of verification (Refer to the section D.2. of this VCR for details). The verification team conducted telephone interview with end-user and document review to assess whether all physical features (technology, project equipment, and monitoring and metering equipment) of the included CPA specified in the included CPA-DD are in place and that the CME operated the registered CDM PoA and included CPA as per the registered PoA-DD and included CPA-DD or any approved revised PoA-DD and CPA-DD.
Findings	ECOEYE has disseminated fuelwood burning improved cookstoves (ICS) in Myanmar through coordination with local stove retailers and/or distributors under the registered PoA as CME. The verification team checked that ECOEYE provides all implementation cost for the PoA and the distribution of ICS has been for free by interviewing with CME and end-users and documented evidences of project cost. This monitoring period from 13/09/2019 to 22/06/2020 includes the implementation and operation of single CPA (Ref.no. 10415-P1-0002-CP1) as part of PoA at the end of the current monitoring period. The verification team checked ICS using households' address in the ICS registration database and confirmed that the implementation and operation of the project activity has been conducted within the geographical boundary of Myanmar. The start date of crediting period of PoA is 28/08/2018. The first ICS included in this monitoring period was distributed in 28/09/2017 and the distribution date of the last ICS was 19/06/2020. It was verified with relevant end-user agreements signed by ICS user.

[6] CPAs included in the PoA as of the end date of the monitoring period are listed in accordance with Attachment. Instructions for completing this form of CDM-PoA-VCR-FORM

During previous monitoring period two model of the ICS, S26-13 and S32-13 manufactured by SSM, have been distributed in townships across Yangon, Ayeyarwardy, Bago, Sagaing and Shan. Meanwhile only model S32-13 has been distributed only in Ayeyarwardy in current monitoring period. This was confirmed through the ICS registration database and total number of stoves distributed at the end date for the current monitoring period were as follows:

CPA (10415-P1-0002-CP1)	Number of ICS by type	
	ICS S26-13	ICS S32-13
Distributed from 1st to 2nd monitoring period	6,997	169,548
Newly distributed during 3rd monitoring period	0	117,312
Subtotal by type	6,997	286,860
Total	293,857	

The verification team found gap of number of ICSs distribution until MP02 reported in MR of 2nd MP (175,015) and this MP (176,545). This discrepancy is due to the counting of ICS in 2nd MP ER sheet.

In this issuance i.e., MP03 the number of ICSs are properly included in ER calculation:

- The CME correctly counted 1,514 ICSs in Ayeyarwaddy (ASDO17) region for this monitoring period which were erroneously uncounted in the MR of 2nd MP even though they were registered in project database at 2nd verification;
- 4 ICSs with unrecognized serial number have been excluded from the total number of ICSs.

After reviewing the project database and ER sheets, the verification team concluded that explanation of discrepancy in counting of ICSs in ER sheet of MP02 and MP03 is reasonable.

The verification team interviewed ICS user households by its local expert and checked that the ICS of the included CPA specified in the included CPA-DD are in place. Manufacturer's specification and WBT test report were provided and it was confirmed that all physical features of the included CPA specified in the included CPA-DD are in place.

CPA (10415-P1-0002-CP1)	Technical specification of ICS by type	
	ICS S26-13	ICS S32-13
Specific Fuel Consumption	0.035 MJ/min/L	0.039 MJ/min/L
Thermal Efficiency	28.9%	38.7%
Lifespan	5 years	5 years
Thermal power	3.8 kW	4 kW

There are temporary deviations from the registered monitoring plan in the included CPA-DD applicable to this monitoring period and please refer to section E.3.2.1. of this VCR and PRC validation report (version 1.5, 21/06/2021) for more details.

Conclusion

KFQ confirms that

- The implementation and operation of the included CPA has been conducted in accordance with the description contained in the registered PoA-DD and included CPA-DD.;
- The information (data and variables) provided in the MR is in compliance with the registered PoA-DD and included CPA-DD except for the temporary deviation mentioned.
- There are temporary deviations from the registered monitoring plan in the included CPA-DD applicable to this monitoring period. Refer to section E.3.2.1. of this VCR and PRC validation report (version 1.5, 21/06/2021) for more details. The temporary deviations applied are in compliance with the PRC-10415-002 approved on 23-07-2021.

E.2.2. Implementation and operation of the management system

Means of verification	The verification team has checked whether management and operational system including the responsibilities and authorities for monitoring and record-keeping system, etc. are in accordance with that stated in registered PoA-DD and CPA-DD through document review, online interview with the CME of the CPA.
Findings	In order to ensure a successful implementation and operation of the PoA and individual CPA, the CME has developed CDM Manual. This manual includes a standard of procedure to assist CME, distributor of ICS and other monitoring teams in planning and conducting monitoring exercise for the PoA. Through document review, interviews with the CME it was found that CME had established a well-defined management and operational system according to the manual. The organizational structure, responsibilities, competencies, training and capacity building for the PoA were found to be adequate. ECOEYE has involved as CME and CPA implementer in this PoA. The CME establishes end-user agreements with households for CER ownership and the verification team reviewed sampled hardcopies of the end-user agreement as evidence. Monitoring survey was conducted by the ECOEYE and stove distributor (ASDO) teams from 19/10/2019 to 26/10/2019. The CME maintains ICS registration database in electronical format for the CPA of ref.no. 10415-P1-0002-CP1. Distribution data, ICS model and user details are recorded for all distributed ICS in the database. By checking the database with the hardcopy of end-user agreement, the verification team found that the total number of ICS distributed by type and age group was tracked in the database and the database adequately updated. The survey team was supervised and trained by the ECOEYE for data collection and archiving. CME held the training courses on 03/10/2019 and 04/10/2019 in Myanmar. Training materials, pictures and attendance lists of the courses were provided to the verification team. The verification team found that during this monitoring period there was no inclusion of new CPAs and CME implemented and monitored only single CPA (Ref.no. 10415-P1-0002-CP1) as part of the PoA. The verification team reviewed the regular internal meeting result of CME and confirmed that CME reviewed management system of the PoA for continuous improvement during this monitoring period. The verification team confirms that management and operational system, the responsibilities and authorities for monitoring and reporting are in accordance with the responsibilities and authorities stated in the monitoring plan of the registered PoA-DD and CPA-DD. Further, the CPA implementer has implemented and operated the CPA as per the registered monitoring plan as mentioned in the PoA-DD and CPA-DD.
Conclusion	KFQ confirms that • The management system and quality assurance are in accordance with the registered PoA-DD and CPA-DD; • The management system and quality assurance and related procedures have implemented as described in the MR and are in accordance with the registered PoA-DD and included CPA-DD.

E.2.3. Post-registration changes

E.2.3.1. Corrections

There was no post registration change to the PoA identified by verification team during this verification.

However, there were corrections approved on 17/12/2018 (effective approval date, PRC ref.no. PRC-10415-001). Refer to registered PoA-DD Version 2.0 approved on 17/12/2018 (effective approval date).

E.2.3.2. Inclusion of a monitoring plan

The verification team confirms that there were no post-registration changes of a monitoring plan from the registered PoA-DD.

E.2.3.3. Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents

There were no permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodology, or other methodological regulatory documents identified by verification team during this verification.

However, there were permanent changes to the registered monitoring plan approved on 17/12/2018 (effective approval date, PRC ref.no. PRC-10415-001). Refer to registered PoA-DD Version 2.0 approved on 17/12/2018 (effective approval date).

E.2.3.4. Changes to the programme design

There were no post registration changes to the PoA identified by verification team during this verification.

E.2.3.5. Addition of CPA inclusion template

There were no post registration changes to the PoA identified by verification team during this verification.

E.2.3.6. Change of coordination/managing entity

There were no post registration changes to the PoA identified by verification team during this verification.

E.2.3.7. Changes specific to afforestation and reforestation activities

N/A

E.3. Component project activities

E.3.1. Compliance of the CPA implementation with the included CPA design document

Means of verification	**Physical CPA implementation** The verification team has checked the CPA implementation and operation with included CPA-DD and assess the compliance of the project implementation with the included CPA in the VVS through document review, interviews with the CME. On-site inspection was not conducted but online video interviews via zoom application were conducted with CME as alternative means of verification (Refer to the section D.2. of this VCR for details). The verification team conducted telephone interview with end-user and document review to assess whether all physical features (technology, project equipment, and monitoring and metering equipment) of the included CPA specified in the included CPA-DD are in place and whether the CME operated the included CPA as per the included CPA-DD.

Project operation
The verification team checked the operational records including ICS registration database, field survey and calibration result and other relevant information (Appendix 3) and interviewed relevant CME staff and end-user households on the actual operation.

Consecutive monitoring period
The verification team checked monitoring period of previous verifications through interviews with CME as well as history of requests for issuance provided by UNFCCC website to confirm consecutive monitoring periods.

Findings

CPA implementation and operation status
Since registration of the PoA, two CPAs (10415-P1-0001-CP1 and 10415-P1-0002-CP1) included in the PoA until the end of the current monitoring period. First CPA (10415-P1-0001-CP1) was excluded on 03/01/2019 by request from CME. Therefore, this monitoring period from 13/09/2019 to 22/06/2020 covers only one CPA of ref.no.10415-P1-0002-CP1 and CME has chosen to prepare single monitoring report of the monitoring period under the PoA.

The CPA 10415-P1-0002-CP1 includes distribution of portable ICS model called S26-13 and S32-13 manufactured by SSM. The verification team reviewed manufacturer's specification, ICS registration database and end-user agreement with household as well as conducted interview with ICS end-users to check and compare the ICS model that described in the CPA-DD. The verification team confirmed that ECOEYE provides all implementation cost for the CPA and the distribution of ICS has been for free.

The verification team checked ICS using households' address in the ICS registration database and confirmed that the implementation and operation of the CPA has been conducted within the geographical boundary of Myanmar as mentioned in the CPA-DD. During previous monitoring period two model of the ICS, S26-13 and S32-13 manufactured by SSM, have been distributed in townships across Yangon, Ayeyarwardy, Bago, Sagaing and Shan. Meanwhile only model S32-13 has been distributed only in Ayeyarwardy during current monitoring period. This was confirmed through the ICS registration database and total number of stoves distributed at the end date for the current monitoring period were as follows:

CPA (10415-P1-0002-CP1)	Number of ICS by type	
	ICS S26 13	ICS S32 13
Distributed from 1st to 2nd monitoring period	6,997	169,548
Newly distributed during 3rd monitoring period	0	117,312
Subtotal by type	6,997	286,860
Total	293,857	

The verification team found gap of number of ICSs distribution until MP02 reported in MR of 2nd MP (175,015) and this MP (176,545). This discrepancy is due to the minor errors in counting of ICS in 2nd MP ER sheet.

In this issuance i.e., MP03 the number of ICSs are properly included in ER calculation in this monitoring period:

- The CME correctly counted 1,514 ICSs in Ayeyarwaddy (ASDO17) region which were erroneously uncounted even though they were registered in project database at 2nd verification;
- Also, 4 ICSs with unrecognized serial number have been excluded from the total number of ICSs.

After reviewing the project database and ER sheets, the verification team concluded that explanation of discrepancy in counting of ICSs in ER sheet of MP02

and MP03 is reasonable.

The above number of ICS distributed is more than the estimated quantity of 155,000 ICSs (25,000 of S26-13 and 130,000 of S32-13 model) for the year 2020 mentioned in CPA-DD. However, actual number of ICS distribution was more than double of the estimated quantity and CME explained that it was due to positive response from ICS user and support of local NGO such as ASDO as distributor.

ICS distributed (both S26-13 and S32-13) has own identification number with 12 digits for preventing double counting and are recorded in CME's ICS registration database. This is in line with the procedure to avoid double counting of ICS in registered PoA-DD and included CPA-DD. The database includes serial number ID, name and address of recipient, retailer information, stove type replaced, distribution date and operation date, etc. of each stove. CME has considered ICS operation date as next day from the date of distribution to end user.

However, first and last date of ICS distribution included in this monitoring period were indicated as 30/09/2017 and 19/06/2020 respectively in MR (version 1.0) but the verification team found in the CME's project database that there was different date of 28/09/2020 and 22/06/2020 **(Refer to the Appendix 4 / Table 2 / CL ID 01).**

Regarding this CL, correction to distribution date of first ICS (S/N 829517090709) has been made as 28/09/2017 in the revised MR (version 10.0) and reflected in the final MR(version 11.1). For the last ICS, CME explained that last date of ICS distributed is 19/06/2020 and ICS distributed after 17/06/2020 are in the ICS database because they are part of the Batch but not included in ER calculation. The verification verified the dates with relevant end-user agreements signed by ICS user and checked whether the last date is accurately reflected in ER calculation as mentioned by CME. Therefore, it is concluded that the distribution date of first and last ICS included in this monitoring period are 28/09/2017 and 19/06/2020 respectively and the dates are correctly and conservatively considered in ER calculation.

The verification team interviewed ICS user households by its local expert and checked that the ICS of the included CPA specified in the included CPA-DD are in place. Manufacturer's specification and WBT test report were provided and it was confirmed that all physical features of the included CPAs specified in the included CPA-DD are in place.

CPA (10415-P1-0002-CP1)	Technical specification of ICS by type	
	ICS S26 13	ICS S32 13
Specific Fuel Consumption	0.035 MJ/min/L	0.039 MJ/min/L
Thermal Efficiency	28.9%	38.7%
Lifespan	5 years	5 years
Thermal power	3.8 kW	4 kW

There are temporary deviations from the registered monitoring plan in the included CPA-DD applicable to this monitoring period. Please refer to section E.3.2.1. of this VCR and PRC validation report (version 1.5, 21/06/2021) for more details.

Regarding to scale of small-scale CPAs, CME explained that annual energy savings per ICS operated in the monitoring period is less than 1% of the small-scale CDM threshold, i.e. 1,800 MWh^{th} and also satisfied the condition to qualify as a microscale CDM unit in the section F.7. of MR. The annual energy savings per ICS was verified through reviewing of the calculation in the ER spreadsheets and the annual energy savings were correctly determined. Therefore, compliance of the relevant condition of scale of small-scale CPAs was not assessed further in this verification.

Age	Annual energy savings per ICS in MWh^{th} by ICS Model		
	ICS S26-13 (N_{mp02})	ICS S32-13 (N_{mp02})	ICS S32-13 (N_{mp02+})
1-365	Not Applicable	12.93	12.93

	366-730 | 11.01 | 12.45 | Not Applicable 731-1095 | 10.55 | Not Applicable | Not Applicable **Consecutive monitoring period** This is the 3rd monitoring period of PoA since registration of the PoA. Previous monitoring reports were already published on the UNFCCC CDM website in a consecutive manner and completed verification of their respective monitoring periods. Thus, the verification team confirms that monitoring periods have been consecutive and that CPAs have been included in requests for issuance in a consecutive manner.
Conclusion	The raised CL (ID 01) has been completely resolved. KFQ confirms that: • The CPA has been implemented according to the description in the included CPA-DD; • All physical features of the CPA including data collection systems and storage are in place and in accordance with the included CPA-DD; and • All other relevant information provided in the MR is fully in accordance with respective information stated in the included CPA-DD; and • The information on project operation, the management system and quality assurance are complete, correct and in accordance with the CPA-DD and; • The management system and quality assurance and related procedures have implemented as described in the MR and in accordance with the included CPA-DD. • Monitoring periods have been consecutive and that CPAs have been included in requests for issuance in a consecutive manner.

E.3.2. Post-registration changes

E.3.2.1. Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents

There are temporary deviations from the registered monitoring plan notified to the secretariat and approved during this verification.

- Notification date: 20/04/2021 (Approval date: 23/07/2021)
- Reference number: PRC-10415-002
- Deviation period: 13/09/2019-22/06/2020
- Summary of PRC: Biennial monitoring survey is required to determine number of project devices ($N_{y,i,j}$), adjustment to account for any continuous use of pre-project devices during the monitoring period (μ_y), and annual water boiling test (hereinafter "WBT") is required to determine the efficiency of the project device ($\eta_{new,i,j}$). However, the CME could not conduct new monitoring survey and WBT for this monitoring period due to Covid-19 pandemic. Thus, the CME proposed alternative approach to estimate $N_{y,i,j}$, μ_y and $\eta_{new,i,j}$ where previous survey result and WBT result are not applicable, by using:
  - Lower bound of survey result of the 2nd monitoring period for $N_{y,i,j}$ and μ_y
  - Option 1 for measurement method of Data/Parameter table 11 as initial efficiency and Para.25(a) for the loss of efficiency of applied methodology (AMS-II.G, Version 8.0) for $\eta_{new,i,j}$

Refer to DOE assessment in relevant PRC validation report (Version 1.5, 21/06/2021) for more details.

E.3.2.2. Corrections

There were no post-registration changes as corrections during this monitoring period.

E.3.2.3. Changes to the start-date of the crediting period

There were no post-registration changes regarding change in start date of the crediting period during this monitoring period.

E.3.2.4. Inclusion of a monitoring plan

There were no post-registration changes related to the inclusion of monitoring plan during this monitoring period.

E.3.2.5. Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents

There were no post-registration changes related registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents during this monitoring period.

E.3.2.6. Changes to the project design

There were no post-registration changes during this monitoring period.

E.3.2.7. Changes specific to afforestation and reforestation activities

N/A

E.3.3. Compliance of the registered monitoring plan with applied methodologies and standardized baselines

Means of verification	The verification team reviewed the monitoring plan contained in the included CPA-DD against the approved methodology, AMS-II. G. (version 8.0) which is applied to the CPA.
Findings	The verification team found that there were no incompliances between the applicable monitoring plan contained in the CPA-DD (CPA 10415-P1-0002-CP1, version 3.0), and the applied methodology AMS-II. G. (version 8.0). Furthermore, it was found that there were no standardized baselines applied in the included CPA.
Conclusion	KFQ confirms that the monitoring plan is in accordance with the applied methodology, AMS-II.G. (version 8.0). There is no applicable standardized baseline for the included CPA.

E.3.4. Compliance of monitoring activities with the registered monitoring plan

E.3.4.1. Data and parameters fixed ex ante or at renewal of crediting period

Means of verification	Data and parameters fixed ex-ante listed in the MR have been crosschecked & reviewed against – as applicable – the monitoring plan contained in the registered PoA-DD and CPA-DD as well as applied methodology AMS-II.G. (version 8.0) and other relevant CDM related documents.
Findings	Detailed assessment on 'Data and Parameters fixed ex-ante' is as below:

Data/Parameter (unit, description)	Source of data	Value(s) applied	Findings
f_{NRB} (fraction, fraction of woody biomass saved by the project activity during year y that can be established as non-renewable biomass	f_{NRB} calculation sheet · SSC WG 53th meeting report, Annex 20, Eq 3 · FAO Forest Resource Assessment (FRA) 2015 · 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Chapter 4, Table 4.9	0.8832	Crosscheck of the value with the registered PoA-DD, CPA-DD & the applied methodology & tool

		· http://www.fao.org/docrep/004/Y1997E/y1997e21.htm		showed compliance of parameter.
	$NCV_{biomass}$ (TJ/tonne, Net calorific value of the non-renewable woody biomass, briquettes or charcoal used in project devices.)	AMS-II.G version 8.0, Page 17. - Data/parameter table 12	0.015	Crosscheck of the value with the registered PoA-DD, CPA-DD & the applied methodology & tool showed compliance of parameter.
	η_{old} (fraction, Efficiency of pre - project device, which is a three stone fire using firewood (not charcoal), or a conventional device with no improved combustion air supply or flue gas ventilation, that is without a grate or a chimney)	AMS.II-G version 8.0 - Data/parameter table 17	0.1	Crosscheck of the value with the registered PoA-DD, CPA-DD & the applied methodology & tool showed compliance of parameter.
	$EF_{projected\_fossil\ fuel}$ (tCO_2e/TJ, Emission factor for the fossil fuels projected to be used for substitution of non-renewable woody biomass by similar consumers)	AMS.II-G version 8.0, page 5	81.6	Crosscheck of the value with the registered PoA-DD, CPA-DD & the applied methodology & tool showed compliance of parameter.
	LF_y (fraction, leakage adjustment factor)	AMS.II-G version 8.0, Para 42 c	0.95	Crosscheck of the value with the registered PoA-DD, CPA-DD & the applied methodology & tool showed compliance of parameter.
	Life Span (No. of years, Operating life time of S 26 13 and S	Manufacturer specification	5	Crosscheck of the value with the registered

	32 13)			PoA-DD, CPA-DD & Manufacturer specification showed compliance of parameter.
	$B_{old,HH}$ (tonnes/household /year, Annual quantity of woody biomass that would have been used in the household in the absence of the project activity to generate useful thermal energy equivalent to that provided by the project devices	UN Database, year 2016[7] The 2014 Myanmar Population and Housing Census The Union Report Census Report Volume 2, 2015 Table 13[8]	4.18	Crosscheck of the value with the registered PoA-DD, CPA-DD & the applied methodology & tool showed compliance of parameter.
	$B_{old,i,j}$ (tonnes/year, Annual quantity of woody biomass that would have been used in the absence of the project activity to generate useful thermal energy equivalent to that provided by the project device type i and batch j)	Calculated parameter to be fixed ex-ante ($B_{old,HH}/N_{d,HH}$)	4.18	Crosscheck of the value with the registered PoA-DD, CPA-DD & the applied methodology & tool showed compliance of parameter
Conclusion	KFQ confirms that all data and parameters fixed ex ante are explicitly mentioned in the MR and have been correctly and consistently applied. All values are defined in compliance with relevant documentation such as the registered PoA-DD, CPA-DD, applied methodology AMS.II-G.(version 8.0) and other CDM related documentation, where applicable.			

E.3.4.2. Data and parameters monitored

General statement, Information flow & Data collection

Means of verification	The verification of the information flow and data collection of monitoring parameter(s) was done by means of following documents and cross checked: Data generation and aggregation: ・ Information log in end user agreement ・ Information log in monitoring survey and WBT ・ Weighing machine and meters' readings ・ Calibration reports and certificates Aggregation to recording: ・ Transfer information from end user agreement and monitoring survey to project

[7] http://data.un.org/Data.aspx?d=EDATA&f=cmID%3AFW%3BtrID%3A1231

[8] https://myanmar.unfpa.org/en/publications/union-report-volume-2-main-census-report

	database ・ Log with photos of electronic weighing machine, thermometer and moisture meter taken when meter reading is recorded Calculation and reporting: ・ Crosscheck of ER calculation spreadsheets against the PoA-DD and CPA-DD formulae ・ Data cross check between project database generated by the CME and ER calculation spreadsheets The verification team applied acceptance sampling and conducted phone survey to determine whether the CME's record of monitoring survey is met the relevant requirements of the "Sampling and surveys for CDM project activities and programmes of activities" (Refer to section D.4. for details of assessment). The means of verification in relation to the specific parameters are stated in detail in the tables further below.
Findings	As per paragraph 119(b) of PS for PoA (version 02.0), data monitored and required for verification and issuance are kept and archived for at least two years after the end of the final crediting period or the last issuance of CERs, whichever occurs later. However, description in additional comment of each parameters is not consistent with the requirement **(Refer to the Appendix 4 / Table 3 / CAR ID 02).** Regarding this CAR, CME added description as per paragraph 119(b) of PS for PoA (version 02.0) in revised MR. After CME submitted the revised MR, the verification team confirmed that description for archiving electronic copy of data sources are properly updated to be consistent with the relevant requirement. There are 5 parameters to be monitored: number of project devices operating during monitoring period, date of commissioning of project device, efficiency of the project device, adjustment to account any continued use of pre-project devices during the monitoring period and number of project devices distributed per household. By CME interview and reviewing scanned copy of end user agreement & monitoring survey record, WBT record and project database, it was found that CME collects the data from end user agreement, monitoring survey, and WBT and operates a record-keeping system, project database. If was found that the total number of ICS by type and the age group deployed during the crediting period can be tracked in the project database, which is updated regularly. The verification team crosschecked data in scanned copy of end user agreement, monitoring survey record, WBT record with project database and confirmed that data are correctly & consistently collected in project database. Further, it was found that project database itself was used in ER calculation spreadsheets. During CME interview, the verification team checked that CME is keeping all scanned copies of end user agreement & monitoring survey, WBT result, training records and operating manual. Further, CME provided promptly any of requested documents. Thus, it could be confirmed that CME correctly implemented and is operating the record keeping system. Refer E.5 for findings relevant to weighing machine and meters. The findings in relation to the specific parameters are stated in detail in the tables further below.
Conclusion	The raised CAR (ID 02) has been completely resolved. Based on below assessment on the specific parameters, the KFQ verification team confirms that the monitoring of all parameter to be monitored related to GHG emission reductions in the included CPA-DD has been implemented in accordance with the registered monitoring plan and the approved temporary deviation from the registered monitoring plan.

	The responsibilities and authorities for monitoring and reporting are in accordance with the responsibility and authorities stated in the registered monitoring plan and it was verified with CME interview and documented evidence.

Assessment on data/parameter

During the validation process for temporary deviation for $N_{y,i,j}$ μ_y and $\eta_{new,i,j,}$ some information regarding measurement method of each parameter were updated compared to MR version 1.0 to have correct and consistent application of temporary deviation. For detail, please refer to PRC validation report (version 1.5, 21/06/2021).

Detailed assessment on data and parameters monitored is described as below.

Data/Parameter	$N_{y,i,j}$
Data Unit	Number of units
Description	Number of project devices of type i and batch j operating during year y
Source of data	Project database and monitoring survey
Value(s)	CME denoted the quantity of project devices distributed and operating under the MP03 as $N_{y,i,j}$ and classified into two groups N_{mp02} and N_{mp02+} for simplification where, $N_{y,i,j}$: Number of project devices operating during MP03 = N_{mp02} + N_{mp02+} N_{mp02} : Number of project devices operating during MP02 N_{mp02+} : Number of project devices distributed and operating during MP03

Parameter	Description	Value (number of units)
N_{mp02}	Number of project devices operating during MP02	165,804
N_{mp02+}	Number of project devices distributed and operating during MP03	105,272
$N_{y,i,j}$	Number of project devices distributed and operating during MP03 $N_{y,i,j} = N_{mp02} + N_{mp02+}$	271,076

Means of Verification	The verification team conducted document review and performed face to face meeting and online interview with CME in order to: ・Review information flows for generating, aggregating and reporting the monitoring parameters; ・Determine whether the data collection procedures are implemented in accordance with the monitoring plan in the included CPA-DDs; ・Cross-check between information provided in the MR and data from other sources such as project database or monitoring survey result; ・Identify that quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters. Furthermore, the verification team assessed whether the value of the parameter is determined in accordance with alternative monitoring arrangement of the temporary deviation in section E.3.2.1.
Findings	$N_{y,i,j}$ is the number of project devices of type i and batch j operating during year y. Monitoring equipment is not applicable to this parameter. **N_{mp02} is measured in accordance with applied monitoring plan in the registered CPA-DD:** As defined in the applied monitoring plan in the registered CPA-DD, the number of ICS operating under the CPA was determined by sampling survey that was conducted by CME in MP02. This survey provided the fraction of each ICS type and age group. Total 140 samples were surveyed for this CPA in MP02. The exact number of ICS operating under the CPA is based on fraction of ICS of

type (S 32-13 and S 26-13) and age group (1-365 days, 366-730 days and 731-1095 days) found operating in the sampling survey multiplied by total number of distributed ICS with corresponding type and age group.

As per para 27 of General guidelines for SSC CDM methodologies (version 23.1) in case average lifetime of project devices confirmed by manufacturer are more than 4 years and at least 50 per cent of distributed project devices were functional in the previous survey, CPA may apply the result of the surveys for monitoring period up to 12 months after the date of the survey. As defined in footnote 4 of the same guideline, the survey date is the date on which the data collection starts and the previous survey result shall show the confidence/precision of 95/10 to be applied after the survey date.

The verification team confirmed by document review on monitoring survey result of MP02 that,

- Lifetime of project devices of this CPA is confirmed as 5 years by manufacture from manufacturer specification.
- 94% of distributed project devices were functional from the MP02 survey.
- The monitoring survey during MP02 was conducted from 19/10/2019 to 26/10/2019, from monitoring survey result of MP02.
- Survey result met confidence/precision of 95/10 from monitoring survey result of MP02

Thus, the survey result of MP02 can be applied up to 18/10/2020 which is 12 months from the date of the survey as defined in footnote of the same guideline.

The sample size calculator requires a minimum of 102 (9 samples of S26-13 and 93 samples of S32-13) samples. The calculation for determining the sample size was checked by the verification team from a proper tool (sample size calculator provided as a tool of Guidelines for sampling and surveys for CDM project activities and programmes of activities) and found to be appropriated and consistent with equation in registered PoA-DD and registered CPA-DD. CME conducted monitoring survey for 140 sample households (24 samples of S26-13 and 116 samples of S32-13), which meets the minimum number of samples from the sample size calculator.

The applied methodology allows the monitoring frequency to be biennial when confidence level/precision met 95/10. The relative precision of monitoring survey result of MP02 for N_{mp02} is calculated as 4.45% at 95% confidence level in accordance with proper tool (sample size calculator provided as a tool of Guidelines for sampling and surveys for CDM project activities and programmes of activities), thus the verification team concluded that measuring frequency and QA/QC procedures of the registered CPA-DD are satisfied.

The verification team crosschecked the fraction of operating ICS (0.94) and total number of ICS distributed (176,545) with the values in monitoring survey result and project database respectively, and confirmed that they are correctly reported to calculate N_{mp02} (165,804) and the results are reproducible in the corresponding ER calculation spreadsheet for N_{mp02} (Version 09.0).

Thus, the verification team concluded that N_{mp02} (165,804) is correctly measured in accordance with the monitoring plan.

N_{mp02+} is measured in accordance with temporary deviation defined in PRC-10415-002:

As defined in the PRC-10415-002, N_{mp02+} is calculated by the Lower Bound of MP02 monitoring survey result at 95/10 of confidence level/relative precision for operating fraction multiplied by total number of project devices distributed during MP03.

N_{mp02+} = The lower bound of operating fraction of MP02 x No. of project devices distributed during MP03

The verification team reviewed project database and confirmed that total number of

	distributed project devices (117,312) is correctly applied. However, for the lower bound of operating fraction of MP02, the verification team found that lower limit of 95% confidence interval was calculated based on method for mean value parameter in the ER calculation spreadsheet for N_{mp02+} (version 1.0) although operating fraction is a proportional parameter. Thus, the validation team raised a CAR **(Refer to Appendix 4 / Table 3 / CAR ID 03).** As response to this CAR, CME recalculated N_{mp02+} and applied it in ER calculation spreadsheet. After CME submitted the updated ER calculation spreadsheet for N_{mp02+}, and the validation team confirmed that lower bound of the operating fraction is calculated using calculation method for proportion parameter in the updated ER calculation spreadsheet for N_{mp02+}. As a result of checking on updated ER calculation spreadsheet for N_{mp02+} and document review on project database, the verification team confirmed that, the lower bound of fraction of operating project devices (0.90) is correctly calculated and total number of distributed project devices (117,312) is consistent with the value in project database, and they are correctly applied to calculate N_{mp02+} (105,272). Monitoring frequency is not applicable since the temporary deviation applies for the MP03 only. Thus, the verification team concluded that N_{mp02+} is correctly measured in accordance with temporary deviation in PRC that the applied lower bound of MP02 monitoring survey data. $\mathbf{N_{y,i,j} = N_{mp02} + N_{mp02+}}$ The verification team confirmed that $N_{y,i,j}$ is correctly calculated as 271,076 based on N_{mp02} (165,804) and N_{mp02+} (105,272) in accordance with the applied monitoring plan in the registered CPA-DD and approved temporary deviation in PRC.
Conclusion	The raised CAR (ID 03) has been completely resolved. KFQ confirms that: ・ Monitoring of $N_{y,i,j}$ has been carried out in accordance with the monitoring plan as well as the approved temporary deviation (refer to E.3.2). ・ QA/QC procedures are suitable and have been applied in accordance with the monitoring plan.

Data/Parameter	**Date of commissioning of project device i**
Data Unit	Date
Description	Actual date of commissioning of the project device i
Source of data	Project database
Value(s)	Refer to project database in ER calculation sheet
Means of Verification	The verification team conducted document review and performed face to face meeting and online interview with CME in order to: ・Review information flows for generating, aggregating and reporting the monitoring parameters; ・Determine whether the data collection procedures are implemented in accordance with the monitoring plan in the included CPA-DDs; ・Cross-check between information provided in the ER calculation sheets and data from other sources such as end-user agreement or monitoring survey result; ・Identify that quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters.
Findings	CME considered the next date after the date of distribution of ICS as the date of commissioning of ICS. By means of document review on project database, the verification team confirmed that the commissioning date are set as the next date after the date of distribution of ICS. Further, the verification team crosschecked the distribution date with project database and scanned copy of end user agreement for sample 14 households who

	were subject to DOE assessment sampling survey and no inconsistency was found. The data is recorded from start date of ICS distribution 28/09/2017 to the end of the ICS distribution date 19/06/2020. Each distribution was recorded in project database along with the name of recipient, contact details, location of household at the time of distribution of project devices as required in recording frequency in the registered CPA-DD. The verification team reviewed ER calculation sheet and confirmed that households who answered that distributed project device is no longer in use during the monitoring survey are excluded from ER calculation over the entire monitoring period. Further, the verification team checked by document review that project database as well as electronic copies of data source such as end user agreement and monitoring survey are archived. It was confirmed by CME online interview that they will be maintained for at least two years after the end of the final crediting period or the last issuance of CERs, whichever occurs later. Monitoring equipment is not applicable to this parameter. Thus, date of commissioning of project device i are properly measured in accordance with the applied monitoring plan in the registered CPA-DD.
Conclusion	KFQ confirms that: ・ Monitoring of date of commissioning of project device i has been carried out in accordance with the monitoring plan. ・ QA/QC procedures are suitable and have been applied in accordance with the monitoring plan.

Data/Parameter	**Date of commissioning of batch j**
Data Unit	Date
Description	To establish the date of commissioning, the Project Participant may opt to group the devices in “batches” and the latest date of commissioning of a device within the batch shall be used as the date of commissioning for the entire batch
Source of data	Project database
Value(s)	To establish the date of commissioning project device, the CME has not opted to group the devices in “batches” and but used the actual date of distribution of each project device. Therefore, reporting of this parameter is not applicable.
Means of Verification	This parameter is not subject to verification.
Findings	N/A
Conclusion	KFQ confirms that this parameter is not subject to monitoring.

Data/Parameter	$\eta_{new,i,j}$
Data Unit	Fraction
Description	Efficiency of the project device of each type i and batch j
Source of data	Water Boiling Test (WBT) Results and WBT Certificate
Value(s)	

Parameter	Value	Measurement method
$\eta_{new, S26-13, (mp02, 366-730)}$	0.2712	As per Temporary Deviation in PRC
$\eta_{new, S26-13, (mp02, 731-1095)}$	0.2534	
$\eta_{new, S32-13, (mp02, 1-365)}$	0.3870	
$\eta_{new, S32-13, (mp02, 366-730)}$	0.3496	
$\eta_{new, S32-13, (mp02+, 1-365)}$	0.3870	

Means of Verification	The verification team conducted document review and performed face to face meeting and online interview with CME in order to: ・Review information flows for generating, aggregating and reporting the monitoring parameters; ・Determine whether the data collection procedures are implemented in accordance with the monitoring plan in the included CPA-DDs; ・Cross-check between information provided in the MR and data from other sources such as WBT or WBT certificate; ・Identify that quality control and quality assurance procedures in place to prevent

	or identify and correct any errors or omissions in the reported monitoring parameters. Furthermore, the verification team assessed whether the value of the parameter are determined in accordance with alternative monitoring arrangement of the temporary deviation in section E.3.2.1.
Findings	The efficiency of project device ($\eta_{new,i,j}$) are denoted as per their type of ICS (S 26-13, S 32-13) for subscription "i", distributed period(mp02 and mp02+) and their age (1-365 days, 366-730 days, 731-1095 days) for "j". For example, $\eta_{new,S32\ 13,(mp02,1-365)}$ is efficiency of 1-365 days old S32-13 stoves which were distributed before or during MP02. For subscription "i" is defined the categorized group of ICS as per their age based on their commissioning date as below: **Category** / **Description** 1-365 / 1-365 days old registered ICS, Age, as on last day of the monitoring period 366-730 / 366-730 days old registered ICS, Age, as on last day of the monitoring period 731-1095 / 731-1095 days old registered ICS, Age, as on last day of the monitoring period As defined in the temporary deviation in PRC-10415-002, initial efficiency is defined based on WBT certificate as per option 1 of Data/Parameter table 11 in the applied methodology and the loss of efficiency is calculated as per para.25(a) of the applied methodology for $\eta_{new,\ S26\ 13,\ (mp02,\ 731-1095)}$ $\eta_{new,\ S32\ 13,\ (mp02,\ 366-730)}$ and $\eta_{new,\ S32\ 13,\ (mp02+,\ 1-365)}$. However, the verification team found that regarding the monitoring frequency of the efficiency, only paragraph 25(d) of AMS-II.G. was mentioned thus there is inconsistency between the descriptions in MR (version 1.0). Thus, the verification team raised CL ID 02 **(Refer to Appendix 4/Table 2/CL ID 02)**. As response to this CL, CME updated MR description to specify para.25(a) of the applied methodology as monitoring frequency for deviated parameters and para.25(d) for parameters following monitoring plan in registered CPA-DD. After CME updated MR, the verification team concluded that the description for monitoring frequency of devices are correctly explained. It was found in the opened MR that CME applied MP02 monitoring data without any deviation for the 3rd monitoring period and justified the application as MP02 survey data is valid for the period of 12 months in line with general guidelines for SSC CDM methodologies Version 23.1 footnote 4. However, paragraph 25 in the same guidelines states that the simplified requirements described under section 4.8.2 of the same guidelines are applicable only if the applied methodology and the monitoring plan allow for biennial monitoring while the frequency of the monitoring of efficiency in the monitoring plan and the applied methodology is annual. Therefore, CME is requested to explain how the monitoring method is in compliance with applicability of the paragraph 25 and the simplified requirements for the parameter $\eta_{new,S32\ 13,\ (mp02,\ 1-365)}$ and $\eta_{new,S26\ 13,\ (mp02,\ 366-730)}$ **(Refer to Appendix 4/Table 2/CL ID 04)**. Regarding this CL, CME applied alternative measures for the calculation of $\eta_{new,S32\ 13,\ (mp02,\ 1-365)}$ and $\eta_{new,S26\ 13,\ (mp02,\ 366-730)}$ same as other efficiencies and submitted updated ER calculation sheet (version 9.0) and updated Temporary Deviation Justification (version 11.0). After CME submitted updated ER calculation sheet and Temporary Deviation Justification, the validation team confirmed that temporary deviation is applied for $\eta_{new,S32\ 13,\ (mp02,\ 1-365)}$ and $\eta_{new,S26\ 13,\ (mp02,\ 366-730)}$ and the alternative measure are properly and completely defined for non-conforming sub-parameter of efficiency. **$\eta_{new,\ S26\ 13,\ (mp02,\ 366-730)}$, $\eta_{new,\ S26\ 13,\ (mp02,\ 731-1095)}$, $\eta_{new,\ S32\ 13,\ (mp02,\ 1-365)}$, $\eta_{new,\ S32\ 13,\ (mp02,\ 366-730)}$ and $\eta_{new,\ S32\ 13,\ (mp02+,\ 1-365)}$** The verification team confirmed that applied initial efficiencies are from WBT certificate provided by an appropriate certifying agent recognized by national standard body. By means of document review on WBT certificate and CRTN annual

	report which were provided by CME, the verification team confirmed that the certificates for S 26-13 and S32-13 are issued by Centre for Rural Technology, Nepal (CRTN) and CRTN is registered by with Government of Nepal (GoN) and recognized by Nepal Bureau of Standards and Metrology (NBSM), the standard body of Nepal government. Further it was confirmed that the efficiency of S26-13 and S32-13 in WBT certificate by CRTN are adopted in manufacturer specification. The verification team confirmed that the loss of efficiency is correctly calculated by applying linear decrease in efficiency up to the terminal efficiency (20%) through 5 years life span. The verification team confirmed that life span of both ICS type (S26-13 and S32-13) is 5 years from manufacturer specification and linear decrease is correctly calculated based on 5 years to 20% in ER calculation sheets. The measured efficiency of $\eta_{new,\ S26\ 13,\ (mp02,\ 366\text{-}730)}$ (0.2712), $\eta_{new,\ S26\ 13,\ (mp02,\ 731\text{-}1095)}$ (0.2534), $\eta_{new,\ S32\ 13,\ (mp02,\ 1\text{-}365)}$ (0.3870), $\eta_{new,\ S32\ 13,\ (mp02,\ 366\text{-}730)}$ (0.3496) and $\eta_{new,\ S32\ 13,\ (mp02+,\ 1\text{-}365)}$ (0.3870) do not fall below 20 percent, thus emission reductions can be claimed. Thus, the verification team concluded that $\eta_{new,\ S26\ 13,\ (mp02,\ 366\text{-}730)}$ (0.2712), $\eta_{new,\ S26\ 13,\ (mp02,\ 731\text{-}1095)}$ (0.2534), $\eta_{new,\ S32\ 13,\ (mp02,\ 1\text{-}365)}$ (0.3870), $\eta_{new,\ S32\ 13,\ (mp02,\ 366\text{-}730)}$ (0.3496) and $\eta_{new,\ S32\ 13,\ (mp02+,\ 1\text{-}365)}$ (0.3870) are properly calculated in accordance with the temporary deviation in PRC-10415-002.
Conclusion	The raised CLs (ID 02 & ID 04) have been completely resolved. KFQ confirms that: ・ Monitoring of $\eta_{new,i,j}$ has been carried out in accordance with approved temporary deviation (refer to E.3.2). ・ QA/QC procedures are suitable and have been applied in accordance with the monitoring plan.

Data/Parameter	μ_y
Data Unit	Fraction
Description	Adjustment to account for any continued use of pre-project devices during the year y
Source of data	MP02 monitoring survey
Value(s)	CME classified the adjustment to account for any continued use of pre-project devices during MP03 where, μ_{mp02} : For project devices operating during MP02 μ_{mp02+} : For project devices distributed and operated during MP03 Applied values are as below:

Parameter	Description	Value (fraction)
μ_{mp02}	For project devices operating during MP02	0.84
μ_{mp02+}	For project devices distributed and operated during MP03	0.78

Means of Verification	The verification team conducted document review and performed face to face meeting and online interview with CME in order to: ・Review information flows for generating, aggregating and reporting the monitoring parameters; ・Determine whether the data collection procedures are implemented in accordance with the monitoring plan in the included CPA-DDs; ・Cross-check between information provided in the MR and data from other sources such as project database or monitoring survey result; ・Identify that quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters. Furthermore, the verification team assessed whether the value of the parameter is determined in accordance with alternative monitoring arrangement of the temporary

	deviation in section E.3.2.1.
Findings	"Data and parameters monitored' is the adjustment to account for any continued use of pre-project devices during MP03. Monitoring equipment is not applicable to this parameter. **μ_{mp02} is measured in accordance with applied monitoring plan in the registered CPA-DD:** As defined in the applied monitoring plan in the registered CPA-DD, the adjustment to account for any continued use of pre-project devices operating during MP02 was determined by conducting a sampling survey. Total 130 out of 140 samples surveyed for this CPA in MP02 were included in calculation of this parameter (rest 10 ICS have either incorrect address or not found at the registered address . As a result of document review on survey result of MP02, the verification team confirmed that the survey captured the cooking habits of stove usage of households in the project area, including quantification of use of baseline devices, by formulating questions to determine the frequency of usage of both, the project devices and baseline devices as required by selected measurement methods and procedures for μ_{mp02} in the registered CPA-DD. As per para 27 of General guidelines for SSC CDM methodologies (version 23.1), in case average lifetime of project devices confirmed by manufacturer is more than 4 years and at least 50 per cent of distributed project devices were functional in the previous survey, CPA may apply the result of the surveys for monitoring period up to 12 months after the date of the survey. As defined in footnote 4 of the same guideline, the survey date is the date on which the data collection starts and the previous survey result shall show the confidence/precision of 95/10 to be applied after the survey date. The verification team confirmed by document review on monitoring survey result of MP02 that, • Lifetime of project devices of this CPA is confirmed as 5 years by manufacture from manufacturer specification. • 94% of distributed project devices were functional from the MP02 survey. • The monitoring survey during MP02 was conducted from 19/10/2019 to 26/10/2019, from monitoring survey result of MP02 • Survey result met confidence/precision of 95/10 from monitoring survey result of MP02 Thus, the survey result of MP02 can be applied up to 18/10/2020 which is 12 months from the date of the survey as defined in footnote of the same guideline. The verification team crosschecked μ_{mp02} (0.84) with the monitoring survey result of MP02 and confirmed that it is correctly calculated and the calculation is reproducible in the corresponding ER calculation sheet for μ_{mp02} (version 09.0). The applied methodology allows the monitoring frequency to be biennial when confidence level/precision met 95/10. With regard to calculation of sample size of μ_{mp02}, CME used calculator[9] for mean value parameter for MP02 (2nd verification) and total sample size calculated was 115. However, during response to the CAR ID 03 from this verification, CME re-calculated the sample size using a calculator for proportional parameter and the total sample size by the calculator was changed as 133 (10 samples of S26-13 and 123 samples of S32-13). Even though the survey result comes from 130 households (21 samples of S26-13 and 109 samples of S32-13) which is less than the sample size calculated, the relative precision of monitoring survey result of MP02 for μ_{mp02} is calculated as 7.70% at 95% confidence level in accordance with proper calculation tool. Therefore, the verification team concluded that measuring frequency and QA/QC procedures of the registered CPA-DD are satisfied.

[9] Sample size calculator provided as a tool of Guidelines for sampling and surveys for CDM project activities and programmes of activities.

	Thus, the verification team concluded that μ_{mp02}(0.84) is correctly measured in accordance with the monitoring plan. **μ_{mp02+} is measured in accordance with temporary deviation defined in PRC-10415-002:** As defined in the PRC-10415-002, μ_{mp02+} is measured by the Lower Bound in MP02 monitoring survey result at 95/10 of confidence level/relative precision for μ_{mp02}. μ_{mp02+} = The lower bound of μ_{mp02} The value of parameter (0.84) is calculated based on the results of the sampling survey that was conducted by CME at CPA level in the 2nd monitoring period. However, for the lower bound μ_{mp02}, the verification team found that lower limit of 95% confidence interval was calculated based on method for mean value parameter in the ER calculation spreadsheet for N_{MP02+} (version 1.0) although operating fraction is a proportional parameter. Thus, the verification team raised CAR ID 03 **(Refer to Appendix 4 / Table 3 / CAR ID 03)**. As response to this CAR, CME recalculated μ_{mp02+} and applied it in ER calculation spreadsheet. After CME submitted the updated ER calculation spreadsheet for N_{mp02+} (version 09.0), the validation team confirmed that lower bound of μ_{mp02} (μ_{mp02+}) calculated using calculation method for proportion parameter. As a result of checking on calculation for the lower bound of fraction of operating project devices in updated ER calculation sheet for N_{mp02+} and document review on project database, the verification team concluded that, μ_{mp02+} (0.78) is correctly calculated. Monitoring frequency is not applicable since the temporary deviation applies for the MP03 only. Thus, the verification team concluded that μ_{mp02} and μ_{mp02+} are correctly measured in accordance with the temporary deviation in PRC.
Conclusion	The raised CAR (ID 03) has been completely resolved. KFQ confirms that: ・ Monitoring of μ_y has been carried out in accordance with the monitoring plan as well as the approved temporary deviation (refer to E.3.2). ・ QA/QC procedures are suitable and have been applied in accordance with the monitoring plan.

Data/Parameter	$N_{d,HH}$
Data Unit	Number
Description	Number of project devices distributed per household
Source of data	Project database
Value(s)	S26-13 :1 S32-13 :1
Means of Verification	The verification team conducted document review and performed face to face meeting and online interview with CME in order to: ・Review information flows for generating, aggregating and reporting the monitoring parameters; ・Determine whether the data collection procedures are implemented in accordance with the monitoring plan in the included CPA-DDs; ・Cross-check between information provided in the MR and data from other sources such as project database or monitoring survey result; ・Identify that quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters.
Findings	CME considered 1 for $N_{d.HH}$, i.e., only one ICS provided to each household. By means of document review on project database and CME interview, the verification team confirmed that only one ICS is provided to each household. The

	verification team reviewed ER calculation sheets and confirmed that only one ICS are considered for ER calculation for all household. The data is recorded from start date of ICS distribution 28/09/2017 to the end of the ICS distribution date 19/06/2020. Each distribution was recorded in project database along with the name of recipient, contact details, location of household at the time of distribution of project devices as required in recording frequency in the registered CPA-DD. CME has distributed only one improved stove per household. Therefore, $N_{d,HH}$ is equal to one. Project database was checked and households that have received more than one ICS were identified and additional ICS(s) were removed from the project database and emission reduction calculation Further, the verification team crosschecked the number of ICS provided to each household by DOE assessment sampling survey and document review on scanned copies of end user agreement of households of DOE assessment sampling survey. Monitoring equipment is not applicable to this parameter. Thus, Number of project devices distributed per household is properly measured and recorded in accordance with the applied monitoring plan in the registered CPA-DD.
Conclusion	KFQ confirms that: ・ Monitoring of $N_{d,HH}$ has been carried out in accordance with the monitoring plan. ・ QA/QC procedures are suitable and have been applied in accordance with the monitoring plan.

E.3.4.3. Implementation of sampling plan

Means of verification	CME applied a sampling approach for the determination of following data and parameters monitored thus the verification team assessed the compliance of the sampling efforts and surveys with the validated sampling plan in accordance with the "Standard: Sampling and surveys for CDM project activities and programme of activities". Following aspect of sampling implementation was checked during verification: ・ Sampling design and target population ・ Procedure of sampling ・ Sampling frame ・ Sample size calculation result ・ Reliability and precision calculation The monitoring survey and WBT (Water Boiling Test) was conducted on October 2019 and the survey and test result verified by DOE were already applied in 2nd monitoring period. The monitoring survey was conducted from 19/10/2019 to 26/10/2019 and WBT was conducted from 22/10/2019 to 31/10/2019. However, due to COVID-19 pandemic, fresh monitoring survey and WBT for applying new survey result for the 3rd monitoring period could not be conducted. CME decided to apply temporary deviated method from registered monitoring plan for the data and parameters which has non-conforming period. Therefore, the verification team has verified implementation of sampling for last monitoring survey on October 2019 in the process of this verification and approach for the non-conforming period of the relevant parameters was assessed during CPA PRC validation (refer to relevant PRC validation report, ver. 1.5, 21/06/2021). On the other hand, monitoring of the ICS efficiency was finally determined by using temporarily deviated method from the registered monitoring plan during this verification and last WBT result was not applied to the monitoring any further in this verification. Therefore, assessment of implementation for sampling of WBT is no longer mentioned in this section. The verification team conducted document review of report of the sampling survey, sample copies of ICS end-user agreement and survey questionnaire. The

	survey result by CME was cross-checked with DOE's acceptance sampling and phone survey by local expert of the verification team.
Findings	It was found that above mentioned monitoring survey conducted from 19/10/2019 to 26/10/2019 and WBT conducted from 22/10/2019 to 31/10/2019 through document review respectively on survey reports and WBT report of MP02. CME described applicability justification of simplified requirement on monitoring of distributed units for $n_{y,i,j}$ and μ_y in the section E.3. of MR. The description was reviewed with survey result of the CPA and manufacturer specification. The verification team concluded that the applicability of simplified requirement on monitoring for these parameters was properly justified with description in the MR. A stratified sampling approach was used and it is in line with the monitoring plan of the PoA-DD and included CPA-DD. This monitoring period covers only single CPA 10415-P1-0002-CP1 thus the sampling plan was subjected to the CPA 10415-P1-0002-CP1. As per the sampling plan of the registered monitoring plan, 95/10 confidence level and precision were considered as a sampling frame for the monitoring survey. The applied confidence level and precision were verified CME's sample size calculation sheet and found the sampling frame has been correctly considered as per the registered monitoring plan and relevant requirement of Standard for "Sampling and surveys for CDM project activities and programmes of activities" (version 09). Target population includes all ICS distributed till the end of the 2nd monitoring period. Number of the population is 176,545 HHs and it was verified with the ICS registration database. ICS (i.e., household) present in various townships/regions were randomly selected using sample size calculator for each relevant parameter for the CPA. There were 9 strata made for the sampling and the verification team checked that The ICS of same type, age group and province in which they are operating were grouped in the same strata as follow tables.

Stratum No.	1	2	3	4	5	6	7	8	9
Region	Yangon		Ayeyarwady			Bago		Sagaing	Shan
ICS Model	S26-13				S32-13	S26-13			
Age (Days)	1-365	366-730	1-365	366-730	1-365	1-365	366-730	366-730	366-730
Sample Frame	14	728	2,566	1,438	169,548	56	297	1,379	519

The verification team found that the sampling was conducted for all relevant parameters required as per the registered monitoring plan as follow:

- $n_{y,i,j}$: Number of project devices of type i and batch j operating during year y
- μ_y : Adjustment to account for any continued use of pre-project devices during the year y

Every ICS was assigned to only one stratum in such a way that no ICS was excluded. CME used the sample size calculator spreadsheet provided as part of "Guidelines for sampling and surveys for CDM project activities and programme of activities" (version 04).

The sample size was determined for each strata for $n_{y,i,j}$ and μ_y (proportional value). It was checked that the outcome of sample size calculation (required and actual samples) was based on the above mentioned confidence level and precision and presented in the MR.

Regarding sample selection after determining sample size for each parameter, based on stratified sampling method, randomization was performed by CME using MS Excel's built-in random number generator. It was found by interviewing CME that the expected values of parameters such as standard deviation and proportion

	were determined by using the CME's knowledge and experience. The verification team reviewed result of randomization and concluded that the samples are representative of the total population. Based on above document review and interview with CME, it could be concluded that the implementation of survey was considered reliable. Lastly, actual achieved precision was checked against the Guidelines outlined under "Standard for sampling and surveys for CDM project activities and programme of activities" (version 09.0). The results for calculation of achieved reliability are reproducible as following table and in consistent with the result presented in the MR. It was confirmed from the sample size calculation spreadsheet that the required precision was kept <10% during sample size calculation for each type of stove for each age. The reliability (demonstration of precision achieved after the survey results) is depicted in the sample size calculator result corresponding to the MR, which were also found correct. Actual precision achieved based survey result used for this monitoring period

Monitoring Parameter	Actual Precision Achieved	Is required Precision achieved? (< 10%)
$n_{y,i,j}$ Number of project devices of type i and batch j operating during year y	4.45%	Yes
μ_y Adjustment to account for any continued use of pre-project devices during the year y	7.70%	Yes

Based on the verified results the verification team found that the required precision is met in all the cases and therefore the survey results were directly used in the calculation of ERs.

Conclusion	KFQ confirms that the CME has provide a complete and transparent description of the sampling activities in the MR with relevant evidence. KFQ confirms that the CME has conducted sampling efforts and surveys applicable for this monitoring period in compliance with the sampling plan of registered monitoring plan except for ICS efficiency and relevant requirement of Standard for "Sampling and surveys for CDM project activities and programmes of activities" (version 09). Sampling of ICS efficiency is not applicable for this monitoring period as per the approved temporary deviation (PRC-10415-002).

E.3.5. Compliance with the calibration frequency requirements for measuring instruments

Means of verification	The registered monitoring plan of CPA-DD and PoA-DD as well as applied methodology do not specify any requirement for calibration of equipment which is used for WBT test. Nevertheless, the verification team has checked the calibration records, compared with the available instrument specifications as well as the specification of the international standards. The verification team has visually checked use of the instrument with evidence of pictures taken during WBT test and through interview with CME.
Findings	Portable weighing machine, thermometer and moisture meter were used for WBT test conducted from 22/10/2019 to 31/10/2019 applicable to this monitoring period. Regarding accuracy of the equipment incorrectly described in MR, the verification team raised CL and it was completely resolved **(Refer to the Appendix 4 / Table 2 / CL ID 03).** However, during this verification, CME changed monitoring method of ICS efficiency as temporarily deviated from registered monitoring plan thus no

	monitoring equipment is not used for the monitoring any further in this monitoring period. Therefore, no further assessment is not needed for the compliance with the calibration frequency in this verification.
Conclusion	The raised CL (ID 03) was completely resolved. This section no longer applies for this monitoring period as mentioned in the above findings.

E.3.6. Assessment of data and calculation of emission reductions or net removals

E.3.6.1. Calculation of baseline GHG emissions or baseline net GHG removals by sinks

Means of verification	The verification team has reviewed all data, parameters and calculations with respect to calculation of the baseline GHG emissions and checked them against the requirements out of the applied methodology AMS-II.G. (Version 08.0), the registered PoA-DD, CPA-DD and relevant tool applied as well as the approved temporary deviation from the registered monitoring plan. The verification team also assessed the completeness, quality and appropriateness of the data, parameters and calculations. Furthermore, the verification team assessed, whether any assumptions, emission factor, or other reference values – as applicable – used by the CME are justified and correctly applied, in line with the requirements.
Findings	The baseline GHG emissions have been found to be 470,521 tCO_2e for the monitoring period. The following equations were used to determine the baseline emissions as provided in the monitoring report (version 11.1) and applied in the corresponding ER calculation spreadsheets (version 09.0) $ER_{y,i,j} = B_{y,savings,i,j} \times N_{y,i,j} \times u_y \times f_{NRB,y} \times NCV_{biomass} * EF_{projected\ fuel}$ Where, i = Indices for the situation where more than one type of project device is introduced to replace the pre-project devices (i.e Model S26-13 and S32-13) ER_y = Emission reductions by project device of type i and batch j during year y in t CO_2e $B_{y,savings,i,j}$ = Quantity of woody biomass that is saved in tonnes per cook stove device of type i and batch j during year y $N_{y,i,j}$ = Number of project devices of type i and batch j operating during year y u_y = Adjustment to account for any continued use of pre-project devices during the year y when applying equations 6 and 8 (fraction). $f_{NRB,y}$ = Fraction of woody biomass that can be established as non-renewable biomass using survey methods or government data or default country specific fraction of non-renewable woody biomass (fNRB) values available on the CDM website $NCV_{biomass}$ = Net calorific value of the non-renewable woody biomass that is substituted (IPCC default for wood fuel, 0.015 TJ/tonne, based on the gross weight of the wood that is 'air-dried') $EF_{projected\ fuel}$ = Emission factor for the fossil fuels projected to be used for substitution of non-renewable woody biomass by similar consumers. Use a value of 81.6 t CO_2/TJ To calculate $B_{y,savings,i,j}$ CME appllied equation 6 of option 3 of the applied methodology.

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

Where,

$B_{old,i,j}$	=	Annual quantity of woody biomass that would have been used in the absence of the project activity to generate useful thermal energy equivalent to that provided by the project device type i and batch j
$B_{y=1,new,i,survey}$	=	Quantity of woody biomass used by project devices in tonnes per device of type i and batch j
$\eta_{new,i,j}$	=	Efficiency of the device of each type i and batch j implemented as part of the project activity
$\eta_{old,i,j}$	=	Efficiency of pre - project device, which is a three stone fire using firewood (not charcoal), or a conventional device with no improved combustion air supply or flue gas ventilation, that is without a grate or a chimney

$$B_{old,i,j} = (B_{old,HH} / N_{d,HH})$$

Where.

$B_{old,HH}$	=	Annual quantity of woody biomass that would have been used in the household in the absence of the project activity to generate useful thermal energy equivalent to that provided by the project devices
$N_{d,HH}$	=	Number of project device per household

Formula to calculate baseline emissions (BE_y) is:

$$BE_y = \sum\sum ER_{y,i,j} + LE_y$$

i	=	Indices for the situation where more than one type of project device is introduced to replace the pre-project devices
j	=	Indices for the situation where there is more than one batch of project device
BE_y	=	Baseline emissions avoided during year y in t CO_2e
$ER_{y,i,j}$	=	Emission reductions by project device of type i and batch j during year y in t CO_2e
LE_y	=	Leakage emissions in the year y

A complete set of data for baseline emission calculations covering the monitoring period has been provided to KFQ and reviewed during verification as explained E.3.4. and E.3.5. above.

The calculation was found to be correct as well as carried out in accordance with the formulae and methods described in the monitoring methodology AMS-II.G. (version 08.0), the included CPA-DD and the approved temporary deviation from the registered monitoring plan. All emission factors, default values and reference values, as applicable, have been correctly justified, explicitly mentioned in the MR and correctly applied. Especially, the values of following parameters are determined in the approved temporary deviation for non-conforming monitoring period:

- Number of project devices ($N_{y,i,j}$)
- Adjustment to account for any continued use of pre-project devices during the monitoring period ($\mu_{y,i,j}$)
- Efficiency of the project device ($\eta_{new,i,j}$)

Refer to the PRC validation report for details of assessment for alternative approaches.

It was found that the spreadsheets were made available completely and that all

	formulae have been correctly implemented and are accessible and traceable. Rounding of digits, where applicable, has been applied correctly and conservatively. All necessary documentation is collected, referenced and aggregated and is easily accessible in spreadsheets. Key input data for calculation of the baseline GHG emissions could be cross-checked via other sources (if applicable). Further details on cross-checks for parameter and the information flow are given in section E.3.4.2 above. Assessment of monitoring equipment used for the monitoring period is given in E.3.5 above.
Conclusion	KFQ confirms that: • All required data for calculation of the baseline GHG emissions were available for the monitoring period; • Suitable cross-checking of data was possible and has been performed as described; • The CME has followed appropriate methods and formulae for calculating baseline GHG emissions have been followed; • Any emission factors and default values and reference values– as applicable – that were applied in the calculation have been justified and correctly applied; • No assumptions were used; • Calculation of the baseline GHG emissions for the covered monitoring period is fully complete and based on suitable and verifiable evidence.

E.3.6.2. Calculation of project GHG emissions or actual net GHG removals by sinks

Means of verification	The verification team has checked, whether project GHG emissions (if any) were determined in accordance with the applied methodology and the monitoring plan in the registered PoA-DD and included CPA-DD.
Findings	KFQ has found that the approach which does not consider project emissions (i.e. being considered zero, consequently) is in accordance to the applied methodology AMS-II.G. (Version 08.0).
Conclusion	KFQ confirms that the approach with regard to project GHG emissions is correct and thus no project GHG emissions need to be considered in the project based on the applied methodology.

E.3.6.3. Calculation of leakage GHG emissions

Means of verification	The verification team has checked, whether leakage GHG emissions (if any) were determined in accordance with the applied methodology and the monitoring plan in the registered PoA-DD and included CPA-DD.
Findings	As per the para. 32 of the applied methodology, leakage related to the non-renewable woody biomass saved by the project activity shall be assessed based on ex post surveys of users and the areas from which this woody biomass is sourced. CME applied below equation for the calculation of Leakage: $LE_y = B_{y,savings,l,j} \times N_{y,i,j} \times u_y \times f_{NRB,y} \times NCV_{biomass} \times EF_{projected\ fuel} \times (1- LF)$ If this leakage assessment quantifies an increase in the use of non-renewable woody biomass by the non-project households/users, that is attributable to the project activity, then $B_{old,i,j}$ is adjusted to account for the quantified leakage. Alternatively, $B_{y,savings,i,j}$ is multiplied by a net to gross adjustment factor of 0.95 to account for leakages, in which case surveys are not required. CME has multiplied $B_{y,savings,i,j}$ by a net to gross adjustment factor of 0.95 to account for leakages. Therefore, $LE_y = B_{y,savings,l,j} \times N_{y,i,j} \times u_y \times f_{NRB,y} \times NCV_{biomass} \times EF_{projected\ fuel} \times (1- 0.95)$ The leakage GHG emissions have been found to be 23,526 tCO_2e for the monitoring period. A complete set of data for leakage emission calculations covering the monitoring period has been provided to KFQ and reviewed during verification as explained

	E.3.4. and E.3.5. above. The calculation was found to be correct as well as carried out in accordance with the formulae and methods described in the monitoring methodology AMS-II.G. (version 08.0) and included CPA-DD. All emission factors and default values and reference values, as applicable, have been correctly justified, explicitly mentioned in the MR and correctly applied. It was found that the spreadsheets were made available completely and that all formulae have been correctly implemented and are accessible and traceable. Rounding of digits, where applicable, has been applied both correctly and conservatively. All necessary documentation is collected, referenced, aggregated and is easily accessible in spreadsheets. Key input data for calculation of the leakage GHG emissions could be cross-checked via other sources (if applicable). Further details on cross-checks for parameter and the information flow are given in section E.3.4.2 above. Assessment of monitoring equipment used for the monitoring period is given in E.3.5 above.
Conclusion	KFQ confirms that: • All required data for calculation of the leakage GHG emissions were available for the monitoring period; • Suitable cross-checking of data was possible and has been performed as described; • The CME has appropriate methods and formulae for calculating leakage GHG emissions have been followed; • Any emission factors and default values and reference values– as applicable – that were applied in the calculation have been justified and correctly applied; • No assumptions were used; • Calculation of the leakage GHG emissions for the covered monitoring period is fully complete and based on suitable and verifiable evidence.

E.3.6.4. Summary of calculation of GHG emission reductions or net GHG removals by sinks

Means of verification	The verification team has reviewed all data, parameters and calculations with respect to calculation of the GHG emission reductions and checked them against the requirements out of the applied methodology AMS-II.G. (Version 8.0) and the registered PoA-DD and included CPA-DD as well as relevant tool applied. The verification team has also assessed the completeness, quality and appropriateness of the data, parameters and calculations. Furthermore, the verification team has assessed, whether any assumptions, emission factors, or other reference values – as applicable – used by CME has been justified and correctly applied, in line with the requirements. The verification team has further crosschecked – as applicable – any information with other sources available. Means of verification in respect of baseline GHG emissions, project GHG emissions and leakage GHG emissions that form the basis for calculation of the GHG emission reductions are stated in detail in sections E.3.6.1., E.3.6.2. and E.3.6.3. above.
Findings	The GHG emission reductions have been found to be 446,995 tCO_2e for the monitoring period. It was identified that the first day on which CERs are being claimed in this monitoring period has been correctly specified by the CME, being 13/09/2019. $ER_y = \sum\sum ER_{y,i,j} - LE_y$ A complete set of data covering the monitoring period has been provided by the CME. Activity levels and non-activity (ex-ante) parameters have been monitored in accordance with the monitoring plan in the registered PoA-DD and included CPA-DD, as applicable. The calculation was found to be correct as well as carried out in accordance with the formulae and methods described in the monitoring methodology AMS-II.G.

	(Version 8.0), the registered PoA-DD, the included CPA-DD. All emission factors and default values and reference values, as applicable, have been correctly justified. It is checked that there were no errors in the transfer of data for the calculation of emissions reductions. KFQ confirms that rounding of digits has been applied both correctly and conservatively. It was found that the spreadsheets were made available completely to DOE and that all formulae have been correctly implemented and are accessible and traceable.
Conclusion	KFQ confirms that: • All required data for the calculation of GHG emission reductions for whole monitoring period are available in accordance with the monitoring plan in the registered PoA-DD and CPA-DD and approved temporary deviation from the registered monitoring plan. • The first day in which CERs are being claimed in the verification period is 13/09/2019. • Suitable cross-checking of data was possible and has been performed as described. • The CME has followed appropriate methods and formulae for calculating GHG emission reductions have been followed. • Any emission factors and reference values– as applicable – that were applied in the calculation have been justified and correctly applied. • No assumptions were used. • The calculation of the GHG emissions for the covered monitoring period is fully complete and based on suitable and verifiable evidence. • The amount of emission reductions claimed by the CME for the monitoring period from 13/09/2019 to 22/06/2020, amounting to 446,995 tCO_2e, is correctly determined and calculated.

Title and UNFCCC reference number of the CPA	Baseline emissions or baseline net GHG removals by sinks (tCO_2e)	Project emissions or actual net GHG removals by sinks (tCO_2e)	Leakage (tCO_2e)	GHG emission reductions or net GHG removals by sinks (tCO_2e)		
				Amount achieved before 1 January 2013	Amount achieved from 1 January 2013	Amount achieved in the entire monitoring period
Clean Energy Program Supported by Republic of Korea CPA MM 02 (Ref.no. 10415-P1-0002-CP1	470,521	0	23,526	0	446,995	446,995
Total	470,521	0	23,526	0	446,995	446,995

E.3.6.5. Comparison of actual GHG emission reductions or net GHG removals by sinks with estimates in included CPA

Means of verification	The verification team compared the ex-ante estimation of emission reductions in the included CPA-DD with the emission reductions reported by the CME in the section F.5 of MR.
Findings	The verification team reviewed actual emission reductions and ex-ante estimation in the MR and its calculation in ER spreadsheet. It is concluded that the ex-ante estimation of emission reductions for this monitoring period in the MR is accurately calculated and reflected. The actual emission reductions achieved for this monitoring period, from 13/09/2019 to 22/06/2020 (284 days) are 446,995 tCO_2e. The estimated quantity in the included CPA-DD for the comparable period and equivalent number of ICS

	distributed as per final MR are 484,380 tCO_2e. Thus, the actual emission reductions reported by the CME during this monitoring period were lower than the ex-ante estimation in the CPA-DD.
Conclusion	KFQ confirms the reported emission reductions in the MR (Version 11.1) are lower than the ex-ante estimation of emission reductions in the included CPA-DD.

Title and UNFCCC reference number of the CPA	Actual values achieved by the CPAs during this monitoring period	Value estimated in ex ante calculation in the included CPA-DD(s)
Clean Energy Program Supported by Republic of Korea CPA MM 02 (Ref.no. 10415-P1-0002-CP1	446,995	484,380
Total	446,995	484,380

E.3.6.6. Remarks on difference from estimated value in included CPA

Means of verification	As per the instructions in CDM-PoA-VCR-FORM, this section is designed to explain how the cause of any increase in the actual GHG emission reductions in this monitoring period were assessed in accordance with the applicable verification requirements in the CDM VVS for PoA. As there is no actual increase of actual GHG emission reductions (refer to E.3.6.5), the section is not applicable in this monitoring period.
Findings	N/A
Conclusion	N/A

E.3.7. Assessment of reported sustainable development co-benefits

Means of verification	The CME has neither monitored sustainable development co-benefits of the programme activity nor requested the DOE to verify them, the section is therefore not applicable in this monitoring period.
Findings	N/A
Conclusion	N/A

E.3.8. Global stakeholder consultation

Means of verification	N/A
Findings	N/A
Conclusion	N/A

SECTION F. Internal quality control

According to KFQ's Procedure for deciding whether to proceed request for issuance, the final verification report and verification findings underwent a technical review before being submitted to the CME for requesting issuance CERs. The technical review was performed by technical review team composed of a person qualified for this PoA in accordance with KFQ's qualification scheme for CDM project validation and verification for programmes of activities.

SECTION G. Verification opinion

KFQ has carried out a verification of the MR of the PoA titled "Clean Energy Program Supported by Republic of Korea" and the included CPA titled "Clean Energy Program Supported by Republic of Korea CPA MM02" in accordance with CDM validation and verification standard for programmes of activities (Version 02.0).

Through the verification, KFQ could confirm that:

- The programme of activity has been implemented and operated as per the registered PoA-DD and included CPA-DD;

- The distributed project devices being essential for generating emission reduction operates reliably and the monitoring equipment is calibrated appropriately;
- The monitoring plan is as per the applied methodology;
- The monitoring plan in MR is as per the monitoring plan in the registered PoA-DD and CPA-DD and approved temporary deviation;
- The monitoring system and procedures comply with the monitoring system and procedures described in the monitoring plan, and approved methodology including applicable methodological regulatory documents and generated GHG emission reductions data; and
- The GHG emission reductions in the MR (Version 11.1) are calculated without material misstatements.

KFQ's verification opinion refers to the project's GHG emissions and resulting GHG emission reductions reported both determined due to the valid and registered project's baseline, its monitoring plan and its associated documents.

Based on the information we have seen and evaluated, we confirm the followings:

Title of PoA	Clean Energy Program Supported by Republic of Korea		
UNFCCC reference number	10415		
Baseline and monitoring methodology	AMS-II.G. (Version 8.0)		
Coordinating/managing entity	ECOEYE Co., LTD		
Registration Date	28/08/2018		
Registered PoA-DD	Version 2.0 of 25/09/2018		
Period verified in this verification	13/09/2019 to 22/06/2020		
Final version of MR	11.1 (dated 23/07/2021)		
Total GHG emission Reductions Verified	Baseline emissions	: 470,521	tonnes CO_2e
	Project emissions	: 0	tonnes CO_2e
	Leakage	: 23,526	tonnes CO_2e
	Emission reductions	: 446,995	tonnes CO_2e

Title of CPA	Clean Energy Program Supported by Republic of Korea CPA MM02		
UNFCCC reference number	10415-P1-0002-CP1		
Inclusion date	27/12/2018		
Included CPA-DD	Version 3.0 of 26/12/2018		
Applied methodology	AMS-II.G. (Version 8.0)		
Crediting Period	10/01/2019 to 09/01/2029 (Fixed)		
Period verified in this verification	13/09/2019 to 22/06/2020		
Total GHG emission Reductions Verified	Baseline emissions	: 470,521	tonnes CO_2e
	Project emissions	: 0	tonnes CO_2e
	Leakage	: 23,526	tonnes CO_2e
	Emission reductions	: 446,995	tonnes CO_2e

It is the opinion of KFQ that the amount of GHG emission reductions achieved by the component project activity during this monitoring period is correct and that complies with all applicable CDM requirements.

SECTION H. Certification statement

Korean Foundation for Quality has performed the periodic verification of the emission reductions that have been reported for the CDM component project activity "Clean Energy Program Supported by Republic of Korea CPA MM02" (Ref. no. 10415-P1-0002-CP1) for the period from 13/09/2019 to 22/06/2020.

The CPA implementer is responsible for the collection of data in accordance with the monitoring plan in the included CPA-DD and the reporting of GHG emissions reductions from the CPA. It is KFQ's responsibility to express an independent verification statement on the reported GHG emission reductions from the included CPA.

KFQ conducted the verification on the basis of the monitoring methodology AMS-II.G. (Version 8.0), the registered PoA-DD, CPA-DD and the MR and the approved temporary deviation from the registered monitoring plan. The verification included i) checking whether the provisions of the monitoring methodology and the monitoring plan were consistently and appropriately applied and ii) the collection of evidence supporting the reported data.

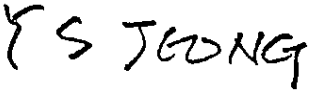
KFQ's verification approach draws on an understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these. KFQ planned and performed the verification by obtaining evidence and other information and explanations that KFQ considers necessary to give reasonable assurance that reported GHG emission reductions are fairly stated.

In our opinion, the GHG emissions reductions of the CDM component project activity "Clean Energy Program Supported by Republic of Korea CPA MM02" (UNFCCC Ref. no. 10415-P1-0002-CP1) for the period from 13/09/2019 to 22/06/2020 are fairly stated in the MR (version 11.1).

The data generation, aggregation, recording, calculation and reporting of GHG emission reductions were correctly conducted on the basis of the approved methodology AMS-II.G. (Version 8.0) and the monitoring plan in the registered PoA-DD and included CPA-DD and the approved temporary deviation from the registered monitoring plan.

Hence, KFQ is able to certify that the emission reductions of the component project activity "Clean Energy Program Supported by Republic of Korea CPA MM02" (UNFCCC Ref. no. 10415-P1-0002-CP1) for the period from 13/09/2019 to 22/06/2020 are 446,995 tCO_2e.

Signed on behalf of the Korean Foundation for Quality

Signature: 

Name : Yu Shim JEONG, Managing director of Energy·Climate Change Assessment Division

Date : 26 July 2021

Appendix 1. Abbreviations

Abbreviations	Full texts
AMS	Approved small scale methodology
ASDO	Ayeyarwady Social Development Organization
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction(s)
CL	Clarification Request
CME	Coordinating/Managing Entity
CMP	COP/MOP Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol
CPA	Component Project Activity
CPA-DD	Component Project Activity design document
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
CRTN	Centre for Rural Technology, Nepal
DOE	Designated Operational Entity
EB	Executive Board
ECOEYE	Ecoeye Co., Ltd.
ER	Emission Reductions
FAR	Forward Action Request
GHG	Greenhous gas(es)
GWP	Global Warming Potential
HH	Household
ICS	Improved Cook Stove
IPCC	Intergovernmental Panel on Climate Change
KFQ	Korean Foundation for Quality
MP	Monitoring Plan
MR	Monitoring Report
PoA	Programme of activities
PoA-DD	Programme of activities design document
PRC	Post-registration change
PS	Clean Development Mechanism Project Standard
QA/QC	Quality Assurance / Quality Control
SCT	SHWE CHAN THAR (Engineering & Construction Co., Ltd.)
SSM	Zhejiang Huiwenmei Stove Co., Ltd (formerly shengzhou stove manufacture)
UNFCCC	United Nations Framework Convention on Climate Change
VCR	Verification and certification report form for CDM programme of activities
VVS	Clean Development Mechanism Validation and Verification Standard
WBT	Water Boiling Test

Appendix 2. Competence of team members and technical reviewers

CERTIFICATE OF COMPETENCE

Name: Su Hyun PARK

Qualification:

	Validation	Verification
-Lead auditor	■	■
-Auditor	□	□
-Technical Expert	□	□
-Local Expert	□	□

Scopes of Expertise:

Technical Area (TA)

1.2 Renewables

3.1 Energy demand

5.2 Caprolactam, Nitric acid, Adipic acid

13.1 Solid waste and wastewater

She is approved as the qualification above according to the KFQ's procedure of Qualifying and Maintaining of Auditor on 18 May 2020.

Energy·Climate Change Assessment Division
Nam Hoon Kim

CERTIFICATE OF COMPETENCE

Name: Hyun Cheol CHO

Qualification:

	Validation	Verification
-Lead auditor	☐	☐
-Auditor	■	■
-Technical Expert	☐	☐
-Local Expert	☐	☐

Scopes of Expertise:

Technical Area (TA)

3.1 Energy demand

He is approved as the qualification above according to the KFQ's procedure of Qualifying and Maintaining of Auditor on 18 May 2020.

Energy·Climate Change Assessment Division
Nam Hoon KIM

CERTIFICATE OF COMPETENCE

Name: Gee Hyun YANG

Qualification:

	Validation	Verification
-Lead auditor	☐	☐
-Auditor	■	■
-Technical Expert	■	■
-Local Expert	☐	☐

Scopes of Expertise:

Technical Area (TA)

1.1 Thermal energy generation

She is approved as the qualification above according to the KFQ's procedure of Qualifying and Maintaining of Auditor on 29 March 2021.

Energy·Climate Change Assessment Division
Pyung Hee JANG

CERTIFICATE OF COMPETENCE

Name: Mi Jung LEE

Qualification:

	Validation	Verification
-Lead auditor	■	■
-Auditor	☐	☐
-Technical Expert	☐	☐
-Local Expert	☐	☐

Scopes of Expertise:

Technical Area (TA)

1.1	Thermal energy generation
1.2	Renewables
3.1	Energy demand
5.1	Chemical Industry
5.2	Caprolactam, nitric and adipic acid
11.1	Emission of Fluorinated gases
11.2	Refrigerant gas production
13.1	Solid waste and wastewater
13.2	Manure

She is approved as the qualification above according to the KFQ's procedure of Qualifying and Maintaining of Auditor on 5 July 2019.

Sustainability Management Institute
Yu Shim JEONG

Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1	CME	Monitoring Report (10415-P1-0002-CP1, MP03)	Ver. 01.0 (05/11/2020) Ver. 09.0 (19/04/2021) Ver. 10.0 (25/05/2021) Ver. 11.1 (23/07/2021)	CME
2	CME	Temporary Deviation Justification	Ver. 1.0 (25/02/2021) Ver. 7.0 (07/04/2021) Ver. 8.0 (25/05/2021) Ver. 11.0 (18/06/2021)	CME
3	CME	PoA 10415 MP03 Nmp02 ER Calculation PoA 10415 MP03 Nmp02+ ER Calculation PoA 10415 MP03 ER summary	Ver. 01.0 (28/01/2021) Ver. 09.0 (19/04/2021) Ver. 09.0 (22/07/2021) Ver. 01.0 (28/01/2021) Ver. 09.0 (19/04/2021) Ver. 09.0 (22/07/2021) Ver. 1.0 (12/03/2021) Ver. 09.0 (19/04/2021) Ver. 09.0 (22/07/2021)	CME
4	CME	WBT of monitoring period 02	05/11/2019	CME
5	Shenzhou Huimei International Trad Co., LTD	Manufacture Specification for S26 13 Manufacture Specification for S32 13	- -	CME
6	CME	Sample copies of ICS End User Agreement signed by the ICS User at the time of Distribution of ICS	=	CME
7	Cetre for Rural Technology, Nepal	WBT certification included in manufacture specification: S26 13 WBT certification included in manufacture specification: S26 13	23/01/2017 30/10/2018	CME
8	CME	Monitoring Report (10415-P1-0002-CP1, MP02) Verification report (10415-P1-0002-CP1, MP02)	Ver. 2.0 (29/01/2020) Ver.1.1 (20/02/2020) All under : https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/BQ0WHAOXJLK25SCPVF4GZ97ER6MD1N/view	Others
9	CME	Monitoring Report(10415-P1-0002-CP1, MP01) Verification Report(10415-P1-0002-CP1, MP01)	Ver. 4.0 (18/06/2019) Ver. 3.1 (24/06/2019 All under : https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/BQ0WHAOXJLK25SCPVF4GZ97ER6MD1N/view	Others
10	CME Earthood Services Private Ltd.	PoA-DD Validation Report for PRC	Ver. 2.0(25/09/2018) Ver. 3.0 (12/11/2018) https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/BQ0WHAOXJLK25SCPVF4GZ97ER	Others

			6MD1N/view	
11	CDM EB	Methodology AMS-II.G (Version 8.0)	Ver. 8.0 (22/07/2016) Ver. 11.0 (28/11/2019) All under : https://cdm.unfccc.int/methodologies/SSCmethodologies/approved	Others
12	CDM EB	Standard: Sampling and surveys for CDM project activities and programmes of activities	Ver. 7.0 (04/05/2017) Ver. 8.0 (28/11/2019) Ver. 9.0 (27/05/2021) https://cdm.unfccc.int/Reference/Standards/index.html	Others
13	CDM EB	General guidelines for SSC CDM methodologies Sampling and surveys for CDM project activities and programmes of activities	Ver. 23.1 (11/02/2021) Ver.4.0 (16/10/2015) https://cdm.unfccc.int/Reference/Guidclarif/index.html	Others
14	CME Earthood Services Private Ltd.	CPA-DD: Clean Energy Program Supported by Republic of Korea CPA MM 02 (CPA 10415-P1-0002-CP1) Validation Report for CPA-DD (CPA 10415-P1-0002-CP1)	Ver. 3.0 (26/12/2018) https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/BQ0WHAOXJLK25SCPVF4GZ97ER6MD1N/view Ver. 2.0 (26/12/2018) https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/BQ0WHAOXJLK25SCPVF4GZ97ER6MD1N/view	Others
15	CME, Panel	SSC_781: Clarification on the validity and applicability of monitoring survey results under AMS-II.G.- Version 11.0	03/07/20 https://cdm.unfccc.int/methodologies/SSCmethodologies/clarifications/60293	Others
16	UNFCCC	Meeting report: CDM Executive Board 106th Meeting	Ver. 1.0(12/06/2020) https://cdm.unfccc.int/EB/index.html	Others
17	CME	ECOEYE stove manual S26 13 ECOEYE stove manual S32 13	-	CME
18	CME	CDM operating manual	-	CME
19	CME	Result of Monitoring Survey Scanned copy for survey forms Survey pictures Screen captures of sample randomization	19/10/2019 to 23/10/2019 10/12/2019	CME
20	HanKook Cal-lab co., Ltd. testo calibration SHWE CHAN THAR Engineering & Construction Co.,Ltd.	Calibration Certificate ・Moisture meter_38693337 ・Moisture meter_38693443 ・Thermometer_42657165 ・Thermometer_42658225 ・Thermometer_42658242 ・Weighing Machine_170901107	 25/09/2019 25/09/2019 18/09/2019 18/09/2019 18/09/2019 18/01/2019	CME
21	KLAS	Korea Laboratory Accreditation Scheme	30/10/2015	CME

22	testo	Moisture meter specification Thermometer specification	- -	CME
23	Myanmar Engineering Council	Weighing machine calibration Expert Certificate	01/01/2017	CME
24	Global Alliance for Clean Cookstoves	Water Boling Test Protocol	Version 4.2.3 19/03/ 2014	Others
25	CME	Training attendance list CPA MM02 MP02 Survey Training PPT	03/10/2019, 04/10/2019 10/2019	CME
26	Ministry of Immigration and Population	The 2014 Myanmar Population and Housing Census Report	05/2015	CME
27	CME	Information Request Form for DOE survey (for 14 households)	14/09/2019- 07/08/2020	CME
28	CDM Executive Board	Standards, Procedures & Checklists • Standard – CDM Validation and Verification Standard for programmes of activities (Version 02.0) • Standard – CDM Project Standard for programmes of activities (Version 02.0) • Procedure – CDM project cycle procedure for programmes of activities (Version 02.0) Form • Monitoring report form for CDM programme of activities (Version 03.0) • Monitoring report form for CDM programme of activities (Version 04.0) • Verification and certification report form for CDM programme of activities (Version 04.0)	 From 29/11/2018 From 29/11/2018 From 29/11/2018 From 31/05/2019 From 06/04/2021 From 06/04/2021 All published under: http://cdm.unfccc.int/Reference/index.html	Others

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

Table 1. Remaining FARs from validation and/or previous verification

FAR ID	01	**Section no.**	E.1.2.	**Date:** 24/02/2021
Description of FAR				
DOE involved in next periodic verification of the PoA must ensure that the approach for calculating fNRB is same for all CPAs under this PoA.				
CME response				**Date:** 25/02/2021
The approach for calculating fNRB is same for all CPAs under this PoA.				
Documentation provided by the CME				
CPA-DD				
DOE assessment				**Date:** 04/03/2021
As single CPA (ref.no. 10415-P1-0002-CP1) is considered for this verification only, this FAR from previous verifications is not relevant to this verification and it is being carry forwarded to next verification. This FAR (ID 01) is converted to FAR ID 02 in table 4 below.				

Table 2. CLs from this verification

CL ID	01	**Section no.**	E.3.1.	**Date:** 24/02/2021
Description of CL				
First and last date of ICS distribution included in this monitoring period were indicated as 30/09/2017 and 19/06/2020 respectively in MR (version 1.0) but the verification team found in the CME's project database that there are other date of 28/09/2020 and 22/06/2020.				
CME response				**Date:** 19/04/2021
Correction to distribution date of first ICS (S/N 829517090709) has been made as 28/09/2017 in the revised MR (version 09.0). For the last ICS, CME explained that last date of ICS distributed is 19/06/2020 and ICS distributed after 17/06/2020 are in the ICS database because they are part of the Batch but not included in ER calculation.				
Documentation provided by the CME				
Revised MR *ER calculation spreadsheet* *Hardcopies of end-user agreement signed on the first and last date of ICS distribution*				
DOE assessment				**Date:** 19/04/2021
The verification verified the dates with relevant end-user agreements signed by ICS user and checked whether the last date is accurately reflected in ER calculation as mentioned by CME. Therefore, it is concluded that the distribution date of first and last ICS included in this monitoring period are 28/09/2017 and 19/06/2020 respectively and the dates are correctly and conservatively considered in ER calculation.				

CL ID	02	**Section no.**	E.3.4.2	**Date:** 24/02/2021
Description of CL				
The verification team found that regarding the monitoring frequency of the efficiency of the project device, only paragraph 25(d) of AMS-II.G. was mentioned thus there is inconsistency between the descriptions in MR (version 1.0).				
CME response				**Date:** 19/04/2021
CME updated MR description to specify para.25(a) of the applied methodology as monitoring frequency for deviated parameters and para.25(d) for parameters following monitoring plan in registered CPA-DD.				
Documentation provided by the CME				
Revised MR(version 09.0 & version 10.0)				
DOE assessment				**Date:** 19/04/2021, 25/05/2021
The verification team concluded that the description for monitoring frequency of devices are correctly explained in the updated MR (version 09.0 & version 10.0).				

CL ID	03	**Section no.**	E.3.5.	**Date:** 24/02/2021

Description of CL	
Accuracy of thermometer and moisture meter are ±0.5 ℃ and 1 % respectively mentioned in their evidences of technical specification. However, the verification team found that CME incorrectly indicated the accuracy in MR (v1) as 0.1 C and 0.1 %.	
CME response	**Date:** 19/04/2021
CME corrected the typo error and submitted revised MR.	
Documentation provided by the CME	
Revised MR *Calibration certificate of thermometers and moisture meters* *Technical specification of thermometers and moisture meters*	
DOE assessment	**Date:** 19/04/2021, 25/05/2021, 23/07/2021
After CME submitted the revised MR, the verification team confirmed that accuracy level of moisture meter reported in the MR (version 09.0 & version 10.0) are consistent with their technical specification. However, after above verification team's assessment, CME changed monitoring method as temporarily deviated from registered monitoring plan thus no monitoring equipment is not used for this monitoring period any further in this verification.	

CL ID	04	**Section no.**	E.3.4.2	**Date:** 10/06/2021
Description of CL				
It was found in opened MR that, with regard to $\eta_{new,S32\ 13,\ (mp02,\ 1\text{-}365)}$ and $\eta_{new,S26\ 13,\ (mp02,\ 366\text{-}730)}$, CME applied MP02 monitoring data without any deviation for 3rd monitoring period and justified the application as MP02 survey data is valid for the period of 12 months in line with general guidelines for SSC CDM methodologies Version 23.1 footnote 4. However, paragraph 25 in the same guidelines states that the simplified requirements described under section 4.8.2 of the same guidelines are applicable only if the applied methodology and the monitoring plan allow for biennial monitoring while the frequency of the monitoring of efficiency in the monitoring plan and the applied methodology is annual. Therefore, CME is requested to explain how the monitoring method is in compliance with applicability of the paragraph 25 and the simplified requirements for the parameter $\eta_{new,S32\ 13,\ (mp02,\ 1\text{-}365)}$ and $\eta_{new,S26\ 13,\ (mp02,\ 366\text{-}730)}$.				
CME response				**Date:** 23/07/2021
CME applied alternative measures for the calculation of $\eta_{new,S32\ 13,\ (mp02,\ 1\text{-}365)}$ and $\eta_{new,S26\ 13,\ (mp02,\ 366\text{-}730)}$ same as other efficiencies and submitted updated ER calculation sheet (version 9.0) and updated Temporary Deviation Justification (version 11.0)				
Documentation provided by the CME				
Updated ER calculation sheet (version 9.0) Updated Temporary Deviation Justification (version 11.0)				
DOE assessment				**Date:** 23/07/2021
After CME submitted updated ER calculation sheet and Temporary Deviation Justification, the validation team confirmed that temporary deviation is applied for $\eta_{new,S32\ 13,\ (mp02,\ 1\text{-}365)}$ and $\eta_{new,S26\ 13,\ (mp02,\ 366\text{-}730)}$ and the alternative measure are properly and completely defined for non-conforming sub-parameter of efficiency.				

Table 3. CARs from this verification

CAR ID	01	**Section no.**	E.1.1.	**Date:** 24/02/2021
Description of CAR				
Regarding correction and permanent changes to the PoA, CME is required to indicate whether the PRC have been approved by the Board as applicable from the period prior to this monitoring period or from this monitoring period as per the instructions for completing MR form but the information was not clearly included in the MR (version 01.0). In Addition, CME temporarily deviated the registered monitoring plan in the CPA-DD during this monitoring period but the MR (version 01.0) does not clearly indicated whether there are temporary deviations from the monitoring plans during this monitoring period				
CME response				**Date:** 19/04/2021
CME added sentences in the sections of revised MR (Version 09.0) for clearer description.				
Documentation provided by the CME				
Revised MR (Version 09.0 and version 10.0)				
DOE assessment				**Date:** 19/04/2021, 25/05/2021

After CME submitted the updated MR, the verification team confirmed that PRC approved on 17/12/2018 (Reference no. 10415-P1-0002-CP1) and temporary deviations are properly mentioned in B.2 and C.2 of updated MR. The verification team confirmed that the submitted MR (version 1.0, version 09.0 and version 10.0) are following the valid monitoring report form (version 03.0) and the instructions therein.

CAR ID	02	**Section no.**	E.3.4.2.	**Date:** 24/02/2021
Description of CAR				
As per paragraph 119(b) of PS for PoA (version 02.0), monitored and required for verification and issuance are kept and archived for at least two years after the end of the final crediting period or the last issuance of CERs, whichever occurs later. However, description in additional comment of each parameters is not consistent with the requirement.				
CME response				**Date:** 19/04/2021
CME added description as per paragraph 119(b) of PS for PoA (version 02.0) in revised MR.				
Documentation provided by the CME				
Revised MR (Version 09.0 and version 10.0)				
DOE assessment				**Date:** 19/04/2021
After CME submitted the revised MR, the verification team confirmed that description for archiving electronic copy of data sources are properly updated to be consistent with the relevant requirement.				

CAR ID	03	**Section no.**	E.3.4.2.	**Date:** 24/02/2021
Description of CAR				
For the calculation for lower bound, the validation team found that lower limit of 95% confidence interval was calculated based on method for mean value parameter in the ER calculation sheet for N_{mp02+} (version 1.0) although both of N_{mp02+} and μ_{mp02+} are proportional parameters.				
CME response				**Date:** 19/04/2021
CME recalculated N_{mp02+} and μ_{mp02+} and applied it in ER calculation spreadsheet. After CME submitted the updated ER calculation sheets.				
Documentation provided by the CME				
Revised ER Calculation sheet for Nmp02+ (Version 09.0)				
DOE assessment				**Date:** 19/04/2021
CME recalculated N_{mp02+} & μ_{mp02+} and applied them in ER calculation spreadsheet. After CME submitted the updated ER calculation sheets(version 09.0), the verification team confirmed that lower bound of the operating fraction calculated using calculation method for proportion parameter.				

Table 4. FARs from this verification

FAR ID	02	**Section No.**	E.1.2.	**Date:** 24/02/2021
Description of FAR				
DOE involved in next periodic verification of the PoA must ensure that the approach for calculating fNRB is same for all CPAs under this PoA.				
CME response				**Date:** *N/A*
N/A				
Documentation provided by the CME				
N/A				
DOE assessment				**Date:** *N/A*
N/A				

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Document information

Version	*Date*	*Description*
04.0	6 April 2021	Revision to: • Reflect the "Clarification: Regulatory requirements under temporary measures for post-2020 cases" (CDM-EB109-A01-CLAR).
03.0	31 May 2019	Revision to: • Ensure consistency with version 02.0 of the "CDM validation and verification standard for programmes of activities" (CDM-EB93-A08-STAN); • Make structural and editorial improvements.
02.0	29 December 2017	Revision to align with the requirements of the "CDM validation and verification standard for programme of activities" (version 01.0).
01.0	5 June 2015	Initial publication.

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