




**Validation report form for
CDM programme of activities
(Version 03.0)**

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

BASIC INFORMATION

Title of the programme of activities (PoA)	Viet Nam Clean Water Program
Version number of the validation report	03
Completion date of the validation report	13/08/2019
Version number of PoA-DD to which this validation report applies	04, dated 13/08/2019
Date when PoA-DD was uploaded for global stakeholder consultation	23/05/2019
Coordinating/managing entity (CME)	Korea Carbon Management Ltd. (KCM)
Host Parties	Viet Nam
Applied methodologies and standardized baselines	Applied methodology (ies): AMS-III.AV: "Low greenhouse gas-emitting safe drinking water production systems" Version 07.0, EB 102 Standardized baseline is not applicable for PoA
Mandatory sectoral scopes	03: Energy demand
Conditional sectoral scopes, if applicable	Not applicable
Name and UNFCCC reference number of the DOE	E-0052. Carbon Check (India) Private Ltd.
Name, position and signature of the approver of the validation report	Amit Anand, CEO 

SECTION A. Executive summary

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Purpose and general description

Korea Carbon Management Ltd. (KCM) has appointed the DOE, Carbon Check (India) Private Ltd. to perform an independent validation of the PoA “Viet Nam Clean Water Program” in Viet Nam (hereafter referred to as “PoA”). This report summarises the findings of validation of the PoA, performed on the basis of UNFCCC criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting. The term “UNFCCC criteria” refers to Article 12 of the Kyoto Protocol, the CDM modalities and procedures or the simplified modalities and procedures for small-scale CDM project activities (as applicable) and the subsequent decisions by the CDM Executive Board. This report contains the findings and resolutions from the validation and a validation opinion.

The proposed PoA will involve the installation of low greenhouse gas emitting water purification systems to provide clean drinking water to households, communities or SMEs in Viet Nam that previously had no access to a public distribution network supplying safe drinking water. The PoA reduces carbon emissions by reducing the amount of fossil fuel and non-renewable biomass required to boil water as a means to purify water before the implementation of PoA.

All CPAs within this PoA will employ low greenhouse gas emitting water purification technologies and apply the approved small-scale CDM methodology AMS-III.AV Low greenhouse gas emitting safe drinking water production systems (Version 07.0) /B02/.

The PoA will reduce the amount of carbon dioxide emissions in the atmosphere that was occurring prior to the usage of low greenhouse gas emitting water purification technologies. The PoA results in reductions of CO₂ emissions that are real, measurable and give long-term benefits to the mitigation of climate change. It is demonstrated that the PoA is not a likely baseline scenario. Emission reductions attributable to the PoA are hence additional to any that would occur in the absence of the PoA in accordance with the UNFCCC CDM requirements for additionality.

The purpose of validation is to have a thorough and independent assessment of the proposed PoA against the applicable CDM requirements, in particular, the project's baseline, monitoring plan and the PoA's compliance with relevant UNFCCC and host Party criteria. These are validated to confirm that the project design, as documented, is sound and reasonable and meets the identified criteria. Validation requirement for all CDM projects and programme of activities is necessary to provide assurance to stakeholders of the quality of the PoA and its intended generation of certified emission reductions (CERs).

Location

The PoA will be implemented within the geographical boundary of Viet Nam.

Scope of the validation

The validation scope is defined as the independent and objective review of the programme of activities design document (PoA-DD /02/). The PoA-DD /02/ is reviewed against the relevant criteria (see above) and decisions by the CDM Executive Board, including the approved baseline and monitoring methodologies. The validation team has, based on the recommendations in the CDM PoA Validation and Verification Standard, version 02.0 /B01-a/ employed a rule-based approach, focusing on the identification of significant risks for project implementation and the generation of CERs.

The validation is not meant to provide any consulting towards the project participants/ coordinating managing entity. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the program design.

While carrying out the validation, CCIPL determines if the PoA complies with the requirements of the paragraph 37 of the CDM Modalities & Procedures, the applicability conditions of the selected methodology /B02/, guidance issued by the Board and also assess the claims and assumptions made in the PoA-DD /02/ without limitation on the information provided by the project participants.

Validation Process

The validation consists of the following four phases:

- I. A desk review of the program design documents
 - A review of the data and information;
 - Cross checks between information provided in the PoA-DD /01/ /02/ and information from sources with all necessary means without limitations to the information provided by the project proponent;
 - II. Follow-up interviews with project stakeholders
 - Interviews with relevant stakeholders in host country with personnel having knowledge of the project development via telephone, email, etc.;
 - Cross check between information provided by interviewed personnel with all necessary means without limitations to the information provided by the project proponent;
 - III. Reference to available information relating to projects or technologies similar projects under validation and review based on the approved methodologies /B02/ being applied of the appropriateness of formulae and accuracy of calculations.
 - IV. The resolution of outstanding issues and the issuance of the final validation report and opinion.
- The report is based on the assessment of the PoA-DD /02/ undertaken through stakeholder consultations, application of standard auditing techniques including but not limited to document reviews and stakeholder interviews, review of the applicable/applied methodologies /B02/ and their underlying formulae and calculations.

This report contains the findings and resolutions from the validation and a validation opinion on the proposed PoA thus confirming the program design in the documents is sound and reasonable and meets the stated requirements and identified criteria.

Conclusion

The selected baseline and monitoring methodology AMS-III.AV “Low greenhouse gas emitting safe drinking water production systems” (Version 07.0) /B02/ is applicable to the project and has been correctly applied. Carbon Check (India) Private Ltd., therefore, recommends the project to the CDM Executive Board for registration.

Carbon Check (India) Private Ltd. concludes the validation with a positive opinion that the CDM PoA “Viet Nam Clean Water Program” in Viet Nam, as described in the PoA-DD /02/, meets all applicable CDM requirements, including those specified in the CDM Project Standard for PoAs /B01-b/, relevant methodologies, tools and guidelines and article 12 of the Kyoto Protocol, paragraph 37 of CDM modalities and procedures, subsequent decisions by the COP/MOP and CDM Executive Board.

SECTION B. Validation team, technical reviewer and approver**B.1. Validation 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)	Validation findings
1.	Team Leader/ Technical Expert	IR	Singh	Vikash Kumar	CC IPL	X	X	X	X
2.	Validator/ Local Expert	EI	Nguyen	Hong Ngoc Trang	CC IPL	X	X	X	X

B.2. Technical reviewer and approver of the validation 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	Agarwalla	Sanjay Kumar	CC IPL
2.	Approver	IR	Anand	Amit	CC IPL

SECTION C. Means of validation**C.1. Desk/document review**

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List of all documents reviewed or referenced during the validation is provided in Appendix-3.

C.2. On-site inspection

Duration of on-site inspection: 03/07/2019 to 05/07/2019				
No.	Activity performed on-site	Site location	Date	Team member
1.	Project site inspection: including CME/PPs Office, project site of specific CPAs. <ul style="list-style-type: none"> •Site visit to the installed water purification system to confirm the technology, technical specification •Data acquisition and processing system. •Monitoring device and installed position. •Data aggregate and QA/QC at CME level. 	INTRACO Office, CPA 1's site	03 - 05 Jul 2019	Vikash Kumar Singh; Nguyen H.N Trang
2.	Interview with the CME/PP/Implementor, local stakeholder, end-users; government sector etc.	CPA 1's site	03 - 05 Jul 2019	Vikash Kumar Singh; Nguyen H.N Trang
3.	Document Review - Reference to available information relating to projects or technologies similar to the proposed CDM project activity under validation; - Review, based on the selected methodology and, where applicable, the selected standardized baseline, of the	INTRACO Office	03 - 05 Jul 2019	Vikash Kumar Singh; Nguyen H.N Trang

	appropriateness of formulae and accuracy of calculations;			
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C.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Hoang	Anh Dung	INTRACO	03 - 05 Jul 2019	<ul style="list-style-type: none"> Project Design Proposed Technology to be used EIA requirement Local stakeholders meeting process Management structure with Roles and Responsibilities Monitoring Plan and process to be adopted Socio-economic Impacts of the project activity Baseline Scenarios and alternatives Emission Reduction 	Vikash Kumar Singh; Nguyen H.N Trang
2	Truong	Manh Cuong	Ekocert	03 - 05 Jul 2019		
3	Luong	Thi Nhung	KCM	03 - 05 Jul 2019		
4	Nguyen	Manh Son	End-user	3 Jul 2019	<ul style="list-style-type: none"> Regional/National government policies/sectoral policies Stakeholder consultation process Environment impact Comparison about local environment and sustainable development for before and after the operation of specific CPA Comments to specific CPA 	Vikash Kumar Singh; Nguyen H.N Trang
5	Nguyen	Bao Ngoc	End-user	3 Jul 2019		
6	Bui	Thi Quyen	End-user	3 Jul 2019		
7	Nguyen	Thi Tuyet	End-user	3 Jul 2019		
8	Dinh	Thi Dinh	End-user	3 Jul 2019		
9	Tran	Thi Thu Ha	Hoa Binh Women union	3 Jul 2019		
10	Nguyen	Thi Huong	End-user	3 Jul 2019		
11	Bach	Trong Kin	End-user	3 Jul 2019		
12	Dinh	Thai Ngoc	Chairman of village PC	3 Jul 2019		
13	Nguyen	Thi Huong	District woman's union	3 Jul 2019		
14	Bui	Son Thuy	District police officer	3 Jul 2019		

C.4. Sampling approach

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<input checked="" type="checkbox"/>	No sampling approach has been used by the Validation team to validate any parameters
<input type="checkbox"/>	A sampling approach has been applied by the Validation team for the following parameter(s):

Parameter	Sampling approach ⁽¹⁾	Sampling type ⁽²⁾	Population	Sample size
-	-	-	-	-

⁽¹⁾ Sampling Approaches:

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

⁽²⁾ Sampling Types:

PS:

Parameter Sampling

C.5. Clarification requests (CLs), corrective action requests (CARs) and forward action requests (FARs) raised

Areas of validation of compliance	No. of CL	No. of CAR	No. of FAR
Programme of activities	-	-	-
Identification of programme type	-	-	-
Description of PoA	-	-	-
Management system	-	CAR 03	-
Demonstration of additionality of PoA	-	-	-
Start date and duration of PoA	-	-	-
Environmental impacts		CAR 04	
Socio-economic impacts	-	-	-
Local stakeholder consultation		CAR 05	
Sustainable development co-benefits	-	-	-
Approval	-	-	-
Authorization	-	-	-
Modalities of communication	-	-	-
Global stakeholder consultation	-	-	-
Generic component project activities			
General description of generic CPA	-	CAR 06 CAR 07	-
Selection of methodologies and standardized baselines	-	-	-
<ul style="list-style-type: none"> Deviation from methodologies and/or methodological tools 	-	-	-
<ul style="list-style-type: none"> Clarification on applicability of methodology, tool and/or standardized baseline 	-	-	-
Application of methodologies and standardized baselines	-	-	-
<ul style="list-style-type: none"> General 	-	CAR 08	-
<ul style="list-style-type: none"> Project boundary, sources and GHGs 	-	-	-
<ul style="list-style-type: none"> Baseline scenario 	-	CAR 09	-
<ul style="list-style-type: none"> Estimation of emission reductions or net anthropogenic removals 	-	CAR 10 CAR 11 CAR 12	-
<ul style="list-style-type: none"> Monitoring plan 	-	CAR 13 CAR 14 CAR 15	-
Crediting period type and duration	-	-	-
Eligibility criteria for inclusion of CPAs	CL 01	-	-
Others (please specify)	-	CAR 01 CAR 02 CAR 16	-
Total	1 CL	16 CARs	--

SECTION D. Validation findings

D.1. Programme of activities

D.1.1. Identification of programme type

Means of validation	DR, I
Findings	-

Conclusion	The validation team reviewed the PoA-DD /02/ and confirms that the CME determines the type of CDM PoA it intends to design and implement a PoA that will include only small-scale non-A/R CPAs. This complies with the requirement of § 31 of the CDM PoA Project Standard (version 02.0) /B01-b/.
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D.1.2. Description of PoA

Means of validation	DR, I
Findings	-
Conclusion	<p>The description of the project activity contained in the PoA-DD /02/ is transparent, detailed and provides a clear overview of the project. Its content was confirmed by means of document review (refer section C.1) and interviews to validate the accuracy and completeness of the project description.</p> <p>The proposed PoA will involve installation and implementation of low greenhouse gas emitting water purification technologies. A CPA within this PoA will be a green field water purification project in Vietnam country. CME has prepared generic CPA-DD which can be used for CPA inclusion.</p> <p>The PoA will result in reduction in usage of non-renewable biomass or fossil fuels in the region of application. The Coordinating/Managing Entity implementing the PoA is Korea Carbon Management Ltd. (KCM). The PoA is a voluntary action by the CME as confirmed by the validation team upon review of the LoA /03/ and the PoA-DD /02/.</p> <p>The PoA-DD /02/ describes how the PoA contributes to the sustainable development in the host country. The validation team did review the LoA /03/ issued by host party DNA to confirm the PoA's contribution to sustainable development in the host country. This is in conformance with the requirements of §33(c) of PoA-PS (version 02.0) /B01-b/ and §69(c) VVS-PoA (version 02.0) /B01-a/.</p> <p>In accordance with §39 of VVS-PoA (version 02.0) /B01-a/, the validation team has assessed the geographical boundary of the PoA within which all CPAs included in the PoA will be implemented and confirms that geographical boundary of the PoA is within Vietnam. This was as checked and confirmed by reviewing the PoA-DD /02/ and interviews with representatives of CME. Review of PoA-DD reveals the definition of the boundary for the PoA in terms of a geographical area of Vietnam (within which all CPAs included in the PoA will be implemented) has been transparently defined, and in establishing the boundary of the PoA, the CME has taken into consideration all applicable national and/or sectoral policies and regulations within that chosen boundary. This conforms to the requirement of §33(c) of PoA-PS (version 02.0) /B01-b/ and §39 of VVS-PoA (version 02.0) /B01-a/.</p> <p>From the desk review of PoA-DD /02/ and interviews of the CME representatives, it is revealed that this programme does not involve any ODA funding. Thus, the validation team considers no ODA funding from any Annex 1 country has been involved under this programme.</p> <p>As per the PoA-DD /02/, the start date of the PoA is 15/05/2019 /06/ which is the date of notification /06/ of the intention to seek the CDM status by the CME to the UNFCCC secretariat and the DNA of the host Party. The same is in accordance with requirements of §41 of PoA-Project Standard (version 02.0) /B01-b/. Further, the validation team confirms that the justification of the start date meets the requirements of the latest Glossary of CDM Terms (version 09.1) /B9/.</p> <p>The length of the PoA is taken as 28 years. In the PoA-DD /02/ it has been confirmed that no CPA shall be applicable for the inclusion in the PoA if the start date is before the start of PoA. This is in conformance with the requirements contained in § 200 PoA-VVS (version 02.0) /B01-a/ and §185 of PoA-PS (version 02.0) /B01-b/.</p>

D.1.3. Management system

Means of validation	DR, I
Findings	CAR 03 was raised and satisfactorily closed. Refer to Appendix 4 for details.

Conclusion	<p>Validation team reviewed the PoA-DD /02/ and confirms that clear and transparent information about responsibilities, records handling, training, technical review procedures, record keeping, documentation control and measures for continual improvements. The same has been confirmed during the interviews with representatives of CME and document review /07/.</p> <p>The validation team concludes that the operational and management plan described in the PoA-DD /02/ is complete and the information provided is in conformance with the requirements of § 36 of the PoA-PS (version 02.0) /B01-b/ and § 44 of the VVS-PoA (version 02.0) /B01-a/. This is deemed appropriate by the validation team.</p> <p>Sampling plan has been provided in the PoA-DD /02/. The validation team found it sufficient.</p> <p>This is in conformance with the requirements of the applied methodology /B02/ and deemed appropriate to the validation team.</p>
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D.1.4. Demonstration of additionality of PoA

Means of validation	DR, I
Findings	-
Conclusion	<p>The CME has demonstrated additionality of the proposed CDM PoA by establishing that in the absence of the proposed PoA, none of the CPAs would occur.</p> <p>The CPAs to be included under the PoA will consist of installation and implementation of low greenhouse gas emitting water purification systems. Those water purification systems will reduce the use and demand for fossil fuels and non-renewable biomass that would have been used to boil water as means to purify water in absence of this PoA. Therefore, it leads to reduce greenhouse gas emissions.</p> <p>This PoA is a voluntary action coordinated by CME /05/. There is no mandatory law or requirement in Viet Nam for the distribution of this purification system technology. As per the PoA DD, no money shall be charged to users for the installation of SDWCs as well as for the water during the operation and thus the CPAs of the proposed program will install and operate water purification systems free of charge to users, hence there is no financial return from the program other than revenue from the sale of CERs. Section C and eligibility criteria number 7 of the PoA DD has described the simple cost analysis for the CPA additionality. In the opinion of validation team, since there are no other benefit (other than CDM), demonstration of additionality on simple cost analysis is appropriate. In the opinion of validation team, if the CPA demonstrates that water purification systems are free of charge to users (as explained above); thus conditions of simple cost analysis as described under § 33 and §34 of TOOL01 “Tool for the demonstration and assessment of additionality” /B04/ has been adhered by the CPAs and no further demonstration is required.</p> <p>The CME has included conditions /02/ that would systematically demonstrate additionality of CPAs under the proposed CDM PoA in the eligibility criteria for inclusion of CPAs in the proposed PoA. CME will use methodological tools: TOOL 01 “Tool for the demonstration and assessment of additionality” /B04/ and TOOL 21 “Demonstration of additionality of small-scale project activities” /B05/. Moreover, the validation team concludes that the approach used to demonstrate additionality for each CPA to be included under the PoA is in accordance with the requirements of the applied methodology AMS-III.AV (version 07.0) and PoA-Project Standard (Version 02.0).</p> <p>This is in conformance with the requirements of §38, §39 of the PoA-PS (version 02.0) /B01-b/ and §45 of VVS-PoA (version 02.0) /B01-a/.</p>

D.1.5. Start date and duration of PoA

Means of validation	DR, I
Findings	-
Conclusion	<p>The validation team reviewed the PoA-DD /02/ and found that the duration of the PoA is 28 years, counting from the start date of the PoA. Based on the above assessment, the validation team concludes that the duration of the proposed PoA is in conformance with the requirements of §43 of PoA-PS (version 02.0) /B01-b/ and §49, §50 of VVS-PoA (version 02.0) /B01-a/.</p> <p>The start date of the PoA is 15/05/2019, which is the date of notification /06/ of the intention to seek the CDM status by the CME to the UNFCCC secretariat and the DNA of the host party. The validation team reviewed the UNFCCC PoA interface /B16/ and confirms the same to be accurate. Based on the above assessment, the validation team concludes that the description and determination of the start date of the proposed PoA is in conformance with the requirements of the Glossary of CDM, Version 09.1 /B09/, §41 of PoA-PS (version 02.0) /B01-b/ and §47 of VVS-PoA (version 02.0) /B01-a/.</p>

D.1.6. Environmental impacts

Means of validation	DR, I
Findings	CAR 04 was raised and satisfactorily closed. Refer to Appendix 4 for details.
Conclusion	<p>Approach for carrying Environmental impact assessments at PoA level is found deemed appropriate for the proposed PoA type. Technologies/measures under proposed PoA have quite positive impacts on the environment and also the scale of the project is small. The same water purification technologies are to be installed throughout the country, therefore the environmental impact was assessed on the PoA level.</p> <p>Host country legislation does not mandate any EIA requirements for the proposed project type as verified from the web-search and sectoral expertise of the validation team. As per the current applicable laws, a full scale EIA is not required as per the list of industries published by the Host Country. Based on the above assessment, it can be concluded that EIA conducted at PoA level is appropriate for the proposed PoA type.</p> <p>This is deemed appropriate in the context of the PoA and also in conformance to the requirements of §44 of PoA PS (version 02.0) /B01-b/ and §51 of VVS-PoA (version 02.0) /B01-a/.</p>

D.1.7. Socio-economic impacts

Means of validation	N/A for the proposed PoA is a non-A/R CDM PoA
Findings	N/A
Conclusion	N/A

D.1.8. Local stakeholder consultation

Means of validation	DR, I
Findings	CAR 05 was raised and satisfactorily closed. Refer to Appendix 4 for details.
Conclusion	<p>It has been indicated in the PoA-DD /02/ that the local stakeholder consultation will be done at CPA level.</p> <p>This is deemed appropriate in the context of the PoA and is in accordance with the requirement of §51 of PoA-PS, Version 02.0 /B01-b/ and §58 of VVS-PoA, Version 02.0 /B01-a/.</p>

D.1.9. Sustainable development co-benefits

Means of validation	Sustainable development co-benefits will not be monitored in the specific monitoring plan.
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Findings	N/A
Conclusion	N/A

D.1.10. Approval

Means of validation	DR, I
Findings	-
Conclusion	<p>By checking the PoA-DD /02/, and the LoA /03/ the following can be confirmed:</p> <p>The LoA /03/ from the host country (Viet Nam) has been obtained and furnished to the DOE by the CME. The LoA, issued on 18/04/2019, has been signed and stamped by an authorized representative of the DNA. LoA states that:</p> <ol style="list-style-type: none"> 1. Title of the PoA: Viet Nam Clean Water programme. 2. This PoA is developed by Korean Carbon Management Ltd. (KCM) and the Investment and Trade Consultancy Company Limited (INTRACO) 3. The government of Viet Nam has ratified the Kyoto Protocol on 25 Sept 2002; 4. The participation in the proposed programme CDM project activities is voluntary; 5. The project contributes to sustainable development of Vietnam; <p>Validation Team based on above can confirm that the issued LoA /03/ from host party refers to the precise proposed PoA title as in the PoA-DD /02/. The Validation Team can also confirm that the project participant is listed in tabular form in section A.5 of the PoA-DD /02/ and this information is consistent with the contact details provided in Appendix -1 of the PoA-DD /02/ and LoA /03/ issued. The Letter of Approval was also found to be unconditional with respect to §69 (a) to (d) of CDM VVS for PoAs (version 02.0) /B01-a/.</p> <p>The assessment above is in compliance with §70-§73 of CDM VVS for PoAs (version 02.0) /B01-a/. During the on-site inspection, the validation team has reviewed the correspondence email between CME and DNA Viet Nam and confirmed that the LoA is authentic and validated in line with the VVS-PoA (version 2.0) /B01-a/.</p>

D.1.11. Authorization

Means of validation	DR, I
Findings	-
Conclusion	<p>There is no separate letter of authorization apart from the LoA.</p> <p>By checking the PoA-DD /02/, and the LoA /03/ the following can be confirmed:</p> <p>The LoA /03/ from the host country (Viet Nam) has been obtained and furnished to the DOE by the CME. The LoA, issued on 18/04/2019, has been signed and stamped by an authorized representative of the DNA. LoA states that:</p> <ol style="list-style-type: none"> 1. Title of the PoA: Viet Nam Clean Water programme. 2. This PoA is developed by Korean Carbon Management Ltd. (KCM) and the Investment and Trade Consultancy Company Limited (INTRACO) 3. The government of Viet Nam has ratified the Kyoto Protocol on 25 Sept 2002; 4. The participation in the proposed programme CDM project activities is voluntary; 5. The project contributes to sustainable development of Vietnam; <p>Validation Team based on above can confirm that the issued LoA /03/ from host party refers to the precise proposed PoA title as in the PoA-DD /02/. The Validation Team can also confirm that the project participant is listed in tabular form in section A.5 of the PoA-DD /02/ and this information is consistent with the contact details</p>

	<p>provided in Appendix -1 of the PoA-DD /02/ and LoA /03/ issued. The Letter of Approval was also found to be unconditional with respect to §69 (a) to (d) of CDM VVS for PoAs (version 02.0) /B01-a/.</p> <p>The assessment above is in compliance with §70-§73 of CDM VVS for PoAs (version 02.0) /B01-a/. During the on-site inspection, the validation team has reviewed the correspondence email between CME and DNA Viet Nam and confirmed that the LoA is authentic and validated in line with the VVS-PoA (version 2.0) /B01-a/.</p>
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D.1.12. Modalities of communication

Means of validation	DR, I
Findings	-
Conclusion	<p>The validation team confirms that the latest applicable template has been utilized by the CME for the MoC /04/. The MoC has been received directly from the signatories of the coordinating/managing entity with whom the DOE has signed contract for the validation service of this proposed project. The personal/corporate identity of the signatories, specimen signatures and legal status of the entity (CME), who has signed the MoC /04/ was confirmed through document review /04/ of following documents:</p> <ol style="list-style-type: none"> 1. Certificate of Incorporation /04-b/ of the CME and the Project Participant for assessment of corporate identity of the signatories 2. Personal Identity of following signatories (of CME and Project Participant) /04-c/ <ul style="list-style-type: none"> • Mr. Thomas Winklehner • Mr. Hoang Anh Dung 3. Declaration /04-d/ by the CME dated 13/06/2019 inline with the requirements of paragraph 82 of VVS for PoAs, version 02.0. <p>The assessment above confirms to the requirement of §75 of CDM PS for PoAs (version 02.0) /B01-b/ and §81-§86 of CDM VVS for PoAs (version 02.0) /B01-a/.</p>

D.1.13. Global stakeholder consultation

Means of validation	DR, I
Findings	-
Conclusion	<p>The process for global stakeholder consultation was conducted in accordance with the requirements of section 7.14 of the VVS-PoA (version 02.0) /B01-a/. The PoA-DD /01/ was published for global stakeholder consultation from 23 May 19 - 21 Jun 19. No comments have been received during the global stakeholder consultation process. This is in conformance to the requirements of section 7.14 of VVS-PoA (version 02.0) /B01-b/.</p>

D.2. Generic component project activities**D.2.1. General description of generic CPA**

Means of validation	DR, I
Findings	CAR 06, CAR 7 were raised and satisfactorily closed. Refer to Appendix 4 for details
Conclusion	After review of the PoA-DD /02/ the validation team confirms that a typical CPA will involve installation and operation of a new low greenhouse gas emitting water purification systems to provide safe drinking water. The safe drinking water from the

	<p>system will be supplied to residential or institutional applications, displace water boiling using non-renewable biomass or fossil fuels.</p> <p>This was further confirmed during the off-site visit interviews with the representatives of the CME, end users and document reviews.</p> <p>The description provided for a generic CPA in part II of PoA-DD /02/ is in conformance to the requirements of §90 of VVS-PoA (version 02.0) /B01-a/.</p>
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D.2.2. Selection of methodologies and standardized baselines

D.2.2.1. Deviation from methodologies and/or methodological tools

Means of validation	N/A
Findings	N/A
Conclusion	N/A

D.2.2.2. Clarification on applicability of methodology, tool and/or standardized baseline

Means of validation	DR, I
Findings	-
Conclusion	No clarification on applicability of methodology and or tools to the proposed PoA has been issued.

D.2.3. Application of methodologies and standardized baselines

D.2.3.1. General

Means of validation	DR, I
Findings	CAR 08 was raised and satisfactorily closed. Refer to Appendix 4 for details
Conclusion	<p>The methodology applied is AMS-III.AV (version 7.0) /B02/. It is applicable to low greenhouse gas emitting water purification systems to provide safe drinking water and displace water boiling using non-renewable biomass or fossil fuel. By means of interviews with representatives of CME and document check /02/ this could be confirmed.</p> <p>The applied methodology is correctly quoted and is identical to the version available on the UNFCCC website /B02/. The applied version of the baseline and monitoring methodology /B02/ is valid at the time of submission for stakeholder consultation and also request for registration. All applicability criteria in the methodology, the applied tools or any other methodology component referred to therein are fulfilled.</p>

D.2.3.2. Project boundary, sources and GHGs

Means of validation	DR, I
Findings	-
Conclusion	<p>As per §11 of the applied methodology AMS-III.AV (version 07.0) /B02/, the boundary of a typical CPA under this PoA confines to <i>“the physical, geographical sites of the low greenhouse gas emitting technologies for water purification installed by the project activity and the household/ institution buildings where the consumers of safe water provided by the systems are located.”</i></p> <p>The CPA boundary has been correctly identified in section I.4 of Part II of PoA-DD /02/.</p> <p>Validation team also confirms that the project boundary for the potential/future CPAs is based on the applied methodology /B02/ and the sources and gases within the boundary have been considered appropriately. This is in conformance with §105 of VVS-PoA (version 02.0) /B01-a/.</p>

D.2.3.3. Baseline scenario

Means of validation	DR, I
Findings	CAR 09 was raised and satisfactorily closed. Refer to Appendix 4 for details
Conclusion	<p>The procedure to identify the most plausible baseline scenario derived from the applied methodology /B02/ has been applied correctly and is transparently and sufficiently documented in the PoA-DD /02/.</p> <p>As prescribed by §13 of the methodology AMS-III.AV (version 07.0) /B02/ the baseline scenario is assuming that in the absence of the project activity, fossil fuel or non-renewable biomass (NRB) will be used to boil water as a means of water purification.</p> <p>As defined in the PoA, the CPAs will involve installing and implementing of low greenhouse gas emitting water purification system. In the absence of the project activity, the equivalent amount of water would have been supplied by the use of fossil fuels and non-renewable biomass for boiling as a mean for water purification.</p> <p>The baseline scenario for the generic CPA has been correctly defined as per the methodology. No laws or regulations in the host country require the use of more efficient low greenhouse gas emitting water purification system. Thus, the above baseline scenario is considered to be accurate and in conformance with the requirements of the applied methodology /B02/ and §111 of VVS-PoA (version 02.0) /B01-a/.</p>

D.2.3.4. Estimation of emission reductions or net anthropogenic removals

Means of validation	DR, I
Findings	CAR 10; CAR 11; CAR 12 were raised and satisfactorily closed. Refer to Appendix 4 for details
Conclusion	<p>The steps taken and the equations and parameters applied in the PoA-DD to calculate project emissions, baseline emissions, leakage and emission reductions comply with the requirements of the selected methodology including applicable tool(s).</p> <p>The validation team has assessed the algorithms and/or formulae used to calculate project emissions, baseline emissions, leakage and emission reductions, by comparing information in the PoA-DD /02/ with the requirements of the selected methodology.</p> <p>Baseline emission:</p> <p>The emissions are calculated based on the energy demand for boiling water, and in case of displacement of NRB, the baseline emissions are corrected for the fraction of the biomass that can be demonstrated as non-renewable. Only purified water consumed for drinking purposes can be used in the baseline calculation.</p> $BE_y = QPW_y \times m \times X_{boil} \times SEC \times \sum_i (BL_{fuel,i} \times f_i \times EF_{projected\ fossil\ fuel,i} \times 10^{-9})$ <p>Where:</p> <p>BE_y = Baseline emissions during the year y in (t CO₂e)</p> <p>QPW_y = Total quantity of water purified by the project in year y (L)</p> <p>m = Fraction of functional appliances that are providing the SDW (%).</p> <p>X_{boil} = Fraction of the population served by the project activity for which the common practice of water treatment is or would have been water boiling.</p> <p>SEC = Specific energy consumption required to boil one litre of water (kJ/L).</p> <p>BL_{fuel,i} = Proportions of baseline fuel type i (NRB and/or fossil fuels) used in the absence of the project activity (fraction)</p>

f_i = Fraction of non-renewable fuel type i used in the absence of the project activity in year y .
 $EF_{\text{projected_fossil fuel, } i}$ = Emission factor of the fuel type i substituted (tCO_2/TJ)

As per paragraph 16 of AMS-III.AV (version 07.0) /B02/, the quantity of purified water in a year is:

- (a) Option 1: Directly monitored; or
- (b) Option 2: Indirectly monitored

As this CPA involves installation of Safe Water Drinking Center (SWDC);

For SWDC, the quantity of purified water in a year will be directly monitored using a flow meter.

The quantity of purified water (directly or indirectly monitored and calculated, respectively) is subject to a cap that must be established based on the population (P) serviced by the project activity and the maximum quantity of drinking water per person per day of 5.5 L/person/day.

Specific energy consumption required to boil one litre of water is to be calculated as follows:

$$SEC = [WH \times (T_f - T_i) + 0.01 \times WHE] / \eta_{wb}$$

Where

WH = Specific heat of water ($kJ/L \text{ } ^\circ C$). Default value of 4.186 $kJ/L \text{ } ^\circ C$
 T_f = Final temperature ($^\circ C$). Default value of $100^\circ C$
 T_i = Initial temperature ($^\circ C$). Default value of $20^\circ C$
 WHE = Latent heat of water evaporation (kJ/L). Default value of 2260 kJ/L .
 η_{wb} = Efficiency of the water boiling systems being replace.

Applied default values of the parameters, SEC will be calculated as below:

$$SEC = [357.48 kJ/L] / \eta_{wb}$$

Project emissions:

If the operation of the project water purification system involves consumption of fossil fuels and/or electricity, CO₂ emissions from on-site consumption of fossil fuels and electricity due to the project activity shall be accounted for as project emissions.

$$PE_y = PE_{FF,y} + PE_{EC,y}$$

Emissions from fossil fuel combustion ($PE_{FF,y}$) will be calculated using the latest version of "TOOL 03: Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion."

Emissions from electricity consumption ($PE_{EC,y}$) will be calculated using the latest version of "TOOL 05: Baseline, project and/or leakage emission from electricity consumption and monitoring of electricity generation." /B12/

As per generic CPA, the operation of the project water purification system will not involve the consumption of fossil fuel ($PE_{FF,y} = 0$), and only involve the consumption of electricity.

As per generic approach in TOOL 05 /B12/, the $PE_{EC,y}$ will be calculated as below:

$$PE_{EC,y} = \sum_j EC_{PJ,j,y} \times EF_{EF,j,y} \times (1 + TDL_{j,y})$$

Where:

	<p>$PE_{EC,y}$ = Project emissions from electricity consumption in year y (tCO₂/yr)</p> <p>$EC_{pj,j,y}$ = Quantity of electricity consumed by the project electricity consumption source j in year y (MWh/yr)</p> <p>$EF_{EF,j,y}$ = Emission factor for electricity generation for source j in year y</p> <p>$TDL_{j,y}$ = Average technical transmission and distribution losses for providing electricity to source j in year y</p> <p>As the electricity consumption is from the Grid, $EF_{EF,j,y} = EF_{Grid,CM,y}$</p> <p>Leakage emissions:</p> <p>The leakage relating to the non-renewable woody biomass will be assessed as per the relevant procedures of AMS-I.E /B02-b/</p> <p>As per paragraph 34 of AMS-I.E /B02-b/, leakage related to the non-renewable woody biomass can be accounted by adjusting B_y. B_y can be multiplied by a net to gross adjustment factor of 0.95 to account for leakages, in which case surveys are not required.</p> <p>Emission reductions:</p> <p>As explain before, the emission reductions can be calculated as below:</p> $ER_y = (BE_y \times 0.95 - PE_y)$ <p>Where</p> <p>ER_y = Emission Reductions during year y in tCO₂e</p> <p>BE_y = Baseline emission from the use of non-renewable biomass (NRB) to boil water as a mean of water purification</p> <p>L = Leakage factor to account for non-renewable woody biomass (fraction). The default value of 0.95 is applied to account for leakage</p> <p>PE_y = Project emission from onsite consumption of electricity</p>
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D.2.3.5. Monitoring plan

Means of validation	DR, I		
Findings	CAR 13; CAR 14; CAR 15 were raised and satisfactorily closed. Refer to Appendix 4 for details		
Conclusion	<u>Monitoring plan:</u>		
	<u>Parameters fixed ex-ante either at POA Level or CPA level:</u>		
	All parameters except the below are to be determined at the individual CPA Level and the approach has been deemed appropriate by the validation team.		
	Parameters	Value	Assessment
	Life Span of water treatment technologies – LS	Shall be determined at CPA level.	As per the PoA DD /02/, the value of this parameter shall be determined at CPA level i.e. at the time of CPA inclusion and thus acceptable to the validation team.

	Efficiency of water boiling systems being replaced – n_{wb}	Shall be determined at CPA level.		As per the PoA DD /02/, the value of this parameter shall be determined at CPA level i.e. at the time of CPA inclusion and thus acceptable to the validation team.						
	Proportions of baseline fuel type i(NBR and or fossil fuels) – $BL_{fuel,i}$	Shall be determined at CPA level.		As per the PoA DD /02/, the value of this parameter shall be determined at CPA level i.e. at the time of CPA inclusion and thus acceptable to the validation team.						
	Factor to determine amount of non-renewable fuels – f_i	Shall be determined at CPA level.		As per the PoA DD /02/, the value of this parameter shall be determined at CPA level i.e. at the time of CPA inclusion and thus acceptable to the validation team.						
	Emission factor for the substitution of fossil fuel and non-renewable woody biomass – $EF_{projected fossilfuel}$	<table><tr><th>Emission Factor for Baseline Fuels</th><th>Emissions Factor (tCO2/TJ)</th></tr><tr><td>$EF_{wood fuel}$</td><td>63.7</td></tr><tr><td>EF_{LPG}</td><td>63.1</td></tr></table>	Emission Factor for Baseline Fuels	Emissions Factor (tCO2/TJ)	$EF_{wood fuel}$	63.7	EF_{LPG}	63.1	This is based on AMS-III.AV, Version 07.0 /B02/ and IPCC values, checked and confirmed by the validation team.	
	Emission Factor for Baseline Fuels	Emissions Factor (tCO2/TJ)								
	$EF_{wood fuel}$	63.7								
	EF_{LPG}	63.1								
Fraction of the population serviced by the project activity for which the common practice of water purification is or would have been water boiling – X_{boil}	Shall be determined at CPA level.		As per the PoA DD /02/, the value of this parameter shall be determined at CPA level i.e. at the time of CPA inclusion and thus acceptable to the validation team.							
$EF_{EF,i,y}$ Emission factor for electricity generation for source j in year y	0.8649 tCO ₂ /MWh		Validation team has noted that the value of grid emission factor is based on Grid Emission Factor Report approved by DNA Vietnam dated 29/03/2019 /13/ and thus acceptable to the validation team.							
$TDL_{j,y}$	20 %		Validation team has noted that the value of $TDL_{j,y}$ is based on the							

		default provided by the tool 05 /B12/ and thus acceptable to the validation team.
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Ex-post monitoring parameters

The monitoring plan as provided in the generic CPA includes information on objective, data recording, roles and responsibilities, data archiving and QA/QC procedures (meter calibration procedures). The arrangements described in the generic CPA are common practice for such kind of project activities. The data will be archived for two years after the crediting period.

The monitoring plan content has been checked in the generic CPA and compared against the requirements of the monitoring methodology /B02/.

The monitoring plan is assessed to be appropriate for the technology type installed. All means of implementing the monitoring plan are in line with the applied and monitoring methodology /B02/. The validation team has no doubts that the monitoring arrangements as described in the part II of PoA-DD /02/ will be implemented properly. This is in conformance with the requirements of § 124 (b) §127 and §144 of VVS-PoA (version 02.0) /B01-a/.

Sampling plan: (refer to Appendix 6 for more details on Assessment of Sampling)

According to the “Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities” Version 07.0 /B15/, a sampling plan has been elaborated in the PoA-DD /02/.

The validation team has reviewed the sampling plan developed by the CME and confirms that it is in line with the recommended outline for a sampling plan as provided for in the guideline for sampling and surveys for CDM project activities and programme of activities version 04.0 /B14/.

The CME has developed a sampling plan for the generic CPA. The CME has indicated the objective and reliability requirement that is in line with the “Standard for sampling and surveys for CDM project activities and programme of activities” version 07.0 /B15/. The CME’s objective for the sampling plan is to obtain an unbiased and reliable estimate of the proportion or mean values of the following parameters:

Py	Population who consumes the purified water serviced by the project activity in year y
m	Fraction of functional appliances that are meeting the SDW Standard
Quality of safe drinking water	

The reliability requirement is 95/10 confidence/precision for biennial monitoring and if sampling is done across CPAs and 90/10 confidence/precision for annual monitoring.

The CME has defined the population for each parameter to be monitored: for parameter Py, a survey shall be conducted annually to check the number of persons who concern the purified water supplied by functional project appliances;

for parameter m and Quality of safe drinking water the population is defined as is the SDWC appliances in use.

For the parameter, Fraction of functional appliances that are providing the SDW, every year, SDWC need to be tested on a sample basis (through a statistically representative sample) by an accredited Laboratory to ensure the following conditions that:

- (a) They only use technologies that are meeting the SDW Technology standards as per paragraph 4(b)
- (b) They are still operating or are replaced by an equivalent in service appliance. The use of appliances shall be monitored through self – report measures (survey data from respondents) as well as physical signs that are observable (e.g. wetness of the unit, water in storage receptacle, functionality of parts) as per “Objective measures of functionality and use of project appliances” described in the Appendix
- (c) They are delivering microbiologically safe drinking water and shall met the Microbiological parameters required by QCVN 6-1:2010/BYT /14/ for drinking water to deliver treated water verified to be <1cfu/100 ml E.Coli, using methods for measurement with a lower detection limit (LDL) of 1cfu E.Coli per 100 ml sample.

Emission reductions cannot be claimed if over 10% of appliances in the project activity fail to meet the final water quality requirements mentioned above.

The sampling method for all parameters is simple random sampling as the population is characterised as homogenous. Each groups or across homogeneous group will be sampled and samples will be selected randomly.

The Sample frame will be kept in hardcopy in the CME office and a back-up softcopy will be stored in the computer maintained by the CME in the CPA specific folder. From the assessment, the validation team does not suspect that there will be biasness in the result that will be obtained from the sampling activity.

At the time of validation, the CME had not determined the sample size. Nevertheless, the PP has provided a guide/procedure including formulae that will enable estimation of the sample size. The validation team considers the guide to be sufficient to enable the DOE reproduce the sample size.

However, data to determine the relevant parameter required to estimate the sample size was not available at the time of validation. Data to determine sample size shall be reviewed at the CPA level.

The validation team has assessed the proposed field measurements by reviewing the proposed data collection method and considers that the method is likely to provide reliable data.

For quality assurance/quality control and analysis, the CME has defined data collection procedure; and to minimize non-sampling error the CME has proposed to use well designed and tested questionnaires in order to reduce interviewer bias, which is acceptable according Guideline for Sampling and surveys for CDM project activities and programmes of activities.

The CME has provided a description of the implementation plan. The validation team has validated the sampling plan and confirms that it will provide parameter value estimates in an unbiased and reliable manner. The proposed sampling plan will ensure that samples are randomly selected and are representative of the population.

The monitoring plan is assessed to be appropriate for the technology type installed. All means of implementing the monitoring plan are in line with the applied and monitoring methodology /B02/. The validation team has no doubts that the monitoring arrangements as described in the part II of PoA-DD /02/ will be implemented properly. This is in conformance with the requirements of § 124 (b),

§127 and §144 of VVS-PoA (version 02.0) /B01-a/.

D.2.4. Crediting period type and duration

Means of validation	DR, I
Findings	-
Conclusion	<p>The validation team reviewed the PoA-DD /02/ and found that the CME has defined the type and duration of all corresponding CPA is Fixed Crediting Period, and the duration is 10 years 0 month, non renewable. The duration of crediting period of each CPA is limited to the end date of the PoA or the expected lifetime of the CPA whichever comes earlier.</p> <p>Based on the above assessment, the validation team concludes that the crediting period type and duration is in conformance with the requirement of §135 PoA-VVS (Version 02.0) /B01-a/ and § 122 PS-PoA (Version 02.0) /B01-b/.</p>

D.2.5. Eligibility criteria for inclusion of CPAs

No.	Eligibility criterion - Category/Required condition	Means of validation	Findings	Conclusion
1	The geographical boundary of the CPA consistent with the geographical boundary set in the PoA.	<p>This criterion will ensure that all CPAs are within the geographical boundary set by the PoA (Vietnam).</p> <p>This can be checked via installation records of SDWCs.</p> <p>Therefore, criterion is objective and comprehensive to allow assessment and inclusion of the CPA into the registered PoA.</p>	No finding	<p>According to §124 (a), of the CDM project standard for programmes of activities, version 2.0, the geographical boundary of each CPA shall be consistent with the geographical boundary set in the PoA. The PoA boundary is set as Vietnam. Validation team based on review of PoA-DD /02/ confirms that the eligibility criteria is defined in accordance with the project standard.</p> <p>Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA-DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA.</p>
2	Conditions that avoid double counting of	This criterion will ensure the avoidance of double counting of	CL 01 was raised and satisfactoril	Validation team confirms that this eligibility criterion has been sufficiently set for all

	emission reductions.	<p>emission reductions.</p> <p>Each SDWC will be assigned a unique ID to allow it to be clearly identified with which CPA it belongs to. Each SDWC will include CPA assignment and have corresponding end user details (i.e name, address). This information will be documented in the beneficiary agreement and CPA Project database.</p> <p>The CME will have an agreement with residents who use drinking water from SDWCs in the CPA that the ownership of the emission reduction exclusively belongs to the CME as part of the Carbon Rights Waiver in Beneficiary agreement.</p> <p>This can be checked by reviewing the Beneficiary Agreement; Installation record and Declaration from CME or CPA implementor.</p> <p>Therefore, criterion is objective and comprehensive to allow assessment and inclusion of the CPA into the registered PoA</p>	<p>y closed.</p> <p>Refer to Appendix 4 for details</p>	<p>CPAs in line with §124 (b) of the CDM project standard for programmes of activities, version 2.0. The sources are assessed satisfactorily to avoid double counting in future. Validation team based on review PoA-DD /02/ confirms that the eligibility criteria is defined in accordance with the project standard.</p> <p>Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA-DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA.</p>
3	Conditions to confirm that CPAs are neither registered as CDM project activities, included in another registered PoAs, nor the project activities that have been deregistered	<p>There will be a declaration by CPA implementer and CME on this matter.</p> <p>The criterion deems objective and comprehensive to allow assessment and inclusion of the CPA into the registered PoA.</p>	No finding	<p>Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs in line with §124 (c) of the CDM project standard for programmes of activities, version 2.0. The sources are assessed satisfactorily. Validation team based on review PoA-DD /02/ confirms that the eligibility criteria is defined in accordance with the project standard.</p>

				Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA-DD, including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA.
4	Technology requirements	<p>This can be checked via:</p> <ul style="list-style-type: none"> - Technical specifications confirmation from manufacturer. - Water quality testing result . <p>The referenced documents are deemed to be appropriate to show fulfilment of the criterion. This will be checked and confirmed at the time of CPA inclusion as per the methodology.</p> <p>The criterion deems objective and comprehensive to allow assessment and inclusion of the CPA into the registered PoA.</p>	<p>CL 01 was raised and satisfactorily closed.</p> <p>Refer to Appendix 4 for details</p>	<p>Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs inline with the requirements and applicability conditions prescribed by the methodology, as well as §124 (d) including foot note 23 and 24 and 124 (f) of the CDM project standard for programmes of activities, version 2.0.</p> <p>All CPAs shall apply the methodology AMS-III.AV (Version 07.0). Provided the CPA met the eligibility criteria, the technology under the CPAs of the PoA will be eligible as per AMS-III.AV (Version 07.0). Validation team based on review of PoA-DD /02/ confirms that the eligibility criteria is defined in accordance with the project standard.</p> <p>Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of</p>

				corresponding CPAs in the PoA.
5	Conditions to check the start date of the CPAs through documentary evidence.	As per the PS-PoA version 02.0, no CPA may commence before the PoA start date, or exceed the PoA lifetime. The start date of the CPAs shall be checked via equipment contract.	No finding	<p>Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs in line with §124 (e) of the CDM project standard for programmes of activities, version 2.0. The sources are assessed sufficient to confirm the start date of the CPAs. Validation team based on review PoA-DD /02/ confirms that the eligibility criteria is defined in accordance with the project standard.</p> <p>Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA-DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA.</p>
6	Conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by CPAs.	<p>Any CPA shall demonstrate that the applicability criteria of approved methodology AMS-III.AV. (Version 07.0) are met.</p> <p>This shall be checked and confirmed via</p> <ol style="list-style-type: none"> 1. Declaration by CME or CPA implementer and details of technology/measure provided in CPA-DD 2. Confirmation from local authorities that a public distribution network supplying SDW does not exist in 	No finding	<p>Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs inline with the requirements §124 (f) of the CDM project standard for programmes of activities, version 2.0.</p> <p>All CPA utilizing the generic CPA-DD shall apply and should comply with AMS-III.AV (Version 07.0). Validation team based on review of PoA-DD /02/ confirms that the eligibility criteria is defined in accordance with the project standard.</p> <p>Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the</p>

		<p>the project boundary.</p> <p>3. Water quality testing result</p> <p>4. Technical specification confirmation from manufacturer.</p> <p>5. Each CPA will use the default net to gross adjustment factor of 0.95 to account for leakage as per AMS-I.E, version 09.0 /B02-b/, paragraph 24.</p>		<p>corresponding CPAs. The description in the PoA-DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA.</p>
7	<p>The conditions that ensure that the CPA meets the requirements pertaining to the demonstration of additionality</p>	<p>The additionality of the project activity is demonstrated by a simple cost analysis that is in line with paragraph 10 (a) of Tool 21 “Demonstration of additionality of small-scale project activities” (version 12) and 33 and 34 of TOOL01 “Tool for the demonstration and assessment of additionality”/B04/.</p> <p>The specific CPA is eligible when the CME shall provide the evidence for each CPA that the SDWCs are installed for free to the Users at community centers and the water from the SDWCs is available free of cost to the end users during the operation of the SDWCs. Therefore, criterion is objective and comprehensive to allow assessment and inclusion of the CPA into the registered PoA.</p>	<p>CL 01 was raised and satisfactorily closed.</p> <p>Refer to Appendix 4 for details</p>	<p>Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs §124 (g) of the CDM project standard for programmes activities, version 2.0.</p> <p>All CPAs shall be demonstrated at the CPA level and provided they met this eligibility criteria of the PoA. This is adequately prescribed in section C of the PoA-DD. Validation team based on review of PoA-DD /02/ confirms that the eligibility criteria is defined in accordance with the project standard.</p> <p>Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA-DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the</p>

				PoA.
8	The PoA-specific requirements stipulated by the CME including any conditions related to undertaking local stakeholder consultations and environmental impact analysis.	<p>As per the PoA DD, an environmental impact analysis is not required as demonstrated in section E of the PoA-DD. No further actions needed at the CPA level to satisfy the eligibility criteria.</p> <p>For the local stakeholder consultation, Minutes of meeting, attendance records, invitation letters, etc. will be provided as means of evidence.</p> <p>Therefore, criterion is objective and comprehensive to allow assessment and inclusion of the CPA into the registered PoA.</p>	<p>CAR 05 was raised and satisfactorily closed.</p> <p>Refer to Appendix 4 for details</p>	<p>As per the PoA DD /02/, the local Stakeholder Consultation (LSC) is to be conducted on the CPA Level. Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs as per §124 (i) of the CDM project standard for programmes of activities, version 2.0. The referenced documents are assessed to be appropriate to show fulfilment of the criterion.</p> <p>Validation team based on review of PoA-DD /02/ confirms that the eligibility criteria is defined in accordance with the project standard.</p> <p>Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA-DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA.</p>
9	Conditions to provide an affirmation that funding from Annex I Parties, if any, does not result in a diversion of official development assistance	<p>Declaration of no public funding from CME and CPA Implementer will be provided.</p> <p>In case of ODA involved in funding or prefunding parts of a CPA, a confirmation that no diversion of ODA occurs will be provided.</p>	No finding	<p>Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs as per §35 and §124 (j) in the CDM project standard for programmes of activities, version 02. The referenced documents are assessed to be appropriate to show fulfilment of the criterion. Validation team based on review of PoA-DD /02/ confirms that the eligibility criteria is defined in accordance with the project standard.</p> <p>Furthermore, the eligibility</p>

				<p>criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA-DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA.</p>
10	Where applicable, target group (e.g. domestic/commercial /industrial,rural/urban, grid connected/ offgrid) and distribution mechanisms (e.g. direct installation)	<p>The end-user group is clearly defined as households, communities and SMEs.</p> <p>This eligibility criteria shall be checked and confirmed via:</p> <ol style="list-style-type: none"> 1. The selected operating mechanisms included in each CPA are described. The same can also be verified by agreements to be signed with Users and Installers. 2. Beneficiary agreement. 	No finding	<p>Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs as per §124 (k) in the CDM project standard for programmes of activities, version 02. The referenced documents are assessed to be appropriate to show fulfilment of the criterion. Validation team based on review of PoA-DD /02/ confirms that the eligibility criteria is defined in accordance with the project standard.</p> <p>Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA-DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA.</p>
11	Sampling	CPAs will adhere to all requirements related to sampling for a PoA in accordance with the approved standard: Sampling and surveys for CDM project activities and	<p>CL 01 was raised and satisfactorily closed.</p> <p>Refer to Appendix 4 for details</p>	<p>Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs as per §124 (l) in the CDM project standard for programmes of activities, version 02. This is also in line with the approved standard:</p>

		<p>programme of activities.</p> <p>A minimum 90% confidence interval and a 10% margin of error requirement is achieved for the sampled parameters.</p> <p>When a single sampling plan covers a group of CPAs or when monitoring is conducted biennially (every two years), confidence/precision of 95/10 for the sample size calculation is applicable.</p> <p>The sampling requirement can be checked in the sampling plan in CPA-DD. Therefore, this can be considered as verifiable evidence.</p>		<p>"Sampling and surveys for CDM project activities and programme of activities" Version 07.0.</p> <p>The referenced documents are assessed to be appropriate to show fulfilment of the criterion. Validation team based on review of PoA-DD /02/ confirms that the eligibility criteria is defined in accordance with the project standard.</p> <p>Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA-DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA.</p>
12	<p>Where applicable, the conditions that ensure that every CPA meets the small-scale or microscale threshold and remains within those thresholds throughout the crediting period of the CPA. However, for a CPA that consists of only units that qualify as 'microscale CDM units' as defined in the methodological tool "Demonstration of additionality of microscale project activities", this condition is not required;</p>	<p>The PoA follows AMS-III.A.V low greenhouse gas emitting safe drinking water production systems Version 07.0. As this is a 'type III' small-scale methodology, each CPA under the PoA will achieve emission reductions below 60,000 tCO₂e per annum.</p> <p>The eligibility criteria include a criterion on the size limit which states that 'the CPA's annual emissions reduction in aggregate remains below the smallscale limit of 60,000 tCO₂e reduced per annum throughout the crediting period'.</p> <p>The verifiable evidence</p>	<p>CL 01 was raised and satisfactorily closed.</p> <p>Refer to Appendix 4 for details</p>	<p>Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs as per §124 (m) in the CDM project standard for programmes of activities, version 02.</p> <p>The referenced documents are assessed to be appropriate to show fulfilment of the criterion. Validation team based on review of PoA-DD /02/ confirms that the eligibility criteria is defined in accordance with the project standard.</p> <p>Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA-DD including the supporting evidence for inclusion provides information to meet</p>

		of this will be the emissions reduction calculation spreadsheet.		the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA.
13	<p>Where applicable, the requirements for the debundling check, in case the CPAs belongs to small-scale or microscale project categories.</p> <p>In order to determine the occurrence of debundling in accordance with Methodological tool “Assessment of debundling for small-scale project activities2” Version 04, does the CPA satisfy both of the following conditions:</p> <p>(a) Has the same activity implementer as the proposed small scale CPA or has a coordinating or managing entity which also manages a large scale PoA of the same technology/measure and</p> <p>(b) The boundary is within 1 km of the boundary of the proposed small-scale CPA, at the closest point</p>	<p>The CPAs will adhere to the requirement that it is not the debundling from a large scale PoA/CDM Project Activity.</p> <p>The CME needs to confirm that they did not implement a large scale PoA/ CDM Project Activity within 1 km of the boundary of this proposed small scale CPA with the same technology/measure.</p> <p>The verifiable evidence of this will be the statement of CME and the CPA operator (in case of being different from the CME) that they did not implement a large scale PoA/CDM project activity within 1km of the boundary of this proposed CPA</p>	<p>CL 01 was raised and satisfactorily closed.</p> <p>Refer to Appendix 4 for details</p>	<p>Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs as per §124 (m) in the CDM project standard for programmes of activities, version 02.</p> <p>The referenced documents are assessed to be appropriate to show fulfilment of the criterion. Validation team based on review of PoA-DD /02/ confirms that the eligibility criteria is defined in accordance with the project standard.</p> <p>Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA-DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA.</p>
14	Approval of CPA by CME	<p>The CME approves each CPA to be included into its registered PoA.</p> <p>The verifiable evidence of this will be the Statement of CME giving approval for the CPA to be included into its registered PoA.</p>	No finding	<p>This is deemed reasonable and sufficient to substantiate the eligibility.</p> <p>The referenced documents are assessed to be appropriate to show fulfilment of the criterion.</p>
15	CER ownership	End users receiving SDWC under the specific CPA	No finding	This is deemed reasonable and sufficient to substantiate

		contractually cede their rights to claim and own emission reductions under the Clean Development Mechanism of the UNFCCC to the CME of the PoA. The verifiable evidence of this will be the User agreement signed by end-users including the provision that emission reductions generated by the SDWC are owned by the CME will be provided for each CPA.		the eligibility. The referenced documents are assessed to be appropriate to show fulfilment of the criterion.
16	Awareness and agreement of those operating a CPA on PoA subscription.	Contractual provisions to ensure that those operating the CPA are aware and have agreed that their activity is being subscribed to the PoA. The verifiable evidence of this will be a declaration from CPA operators (in case the CPA operators are different from CME) , stating that they are aware and have agreed that their activity is being subscribed to the PoA will be provided for each CPA.	No finding	This is deemed reasonable and sufficient to substantiate the eligibility. The referenced documents are assessed to be appropriate to show fulfilment of the criterion.

SECTION E. Internal quality control

>>

The final validation report has undergone a technical review and quality review before being submitted to the project participant(s)/coordinating managing entity and UNFCCC Executive Board. A technical reviewer qualified in accordance with CCIPL's qualification scheme for CDM validation and verification performed the technical review.

SECTION F. Validation opinion

>>

The DOE (Carbon Check (India) Private Ltd.) hereafter referred to as CCIPL, has been appointed by "Korea Carbon Management Ltd. (KCM)" to perform validation of their PoA "Viet Nam Clean Water Program". The validation was performed on the basis of the UNFCCC criteria for the Clean Development Mechanism. The scope of the validation is defined as an independent and objective review of the programme of activities design document (PoA-DD) /02/, the project's baseline establishment and monitoring plan and other relevant documents. The information in these documents is reviewed against CDM Validation and Verification Standard for PoAs, Version 02.0

/B01-a/, Kyoto Protocol requirements, CDM Modalities & Procedures and subsequent decisions and guidance by the COP/MOP and CDM Executive Board.

The report is based on the assessment of the PoA-DD /02/ undertaken through stakeholder consultations, application of standard auditing techniques including but not limited to document reviews, stakeholder interviews, review of the applicable/applied methodologies /B02/ and their underlying formulae and calculations.

The Validation team confirms the contractual relationship /08/ signed between the DOE, CCIPL and the CME (KCM). The team assigned to the validation meets the CCIPL internal procedures including the UNFCCC requirements for the team composition and competence. The validation team has conducted a thorough contract review as per UNFCCC and CCIPL's procedures and requirements.

Validation methodology and process

The validation has been performed as described in the VVS (version 02.0) /B01-a/ and constitutes the following steps:

- Publication of the PoA-DD /01/ on the UNFCCC website for GSC.
- Document review of data and information (PoA-DD /01/ and the relevant documents including the reference to information relating to projects or technologies similar to the proposed project activity and review based on the approved methodology /B02/ being applied and the appropriateness of formulae and accuracy of calculations).
- Cross checks between information provided in the PoA-DD and information from other sources
- Follow up actions for cross checking data and off-site assessment / interviews
- Reference to available documents
- Issuance of Validation Report

Validation criteria

The following CDM requirements have been considered:

- Article 12 of the Kyoto Protocol
- Modalities and procedures for CDM (CDM M & P)
- Subsequent decisions by the COP/MOP and CDM Executive Board
- Host country criteria
- Criteria given to provide for consistent project operations, monitoring and reporting.

The host party is Viet Nam and the project is a unilateral PoA. The host party DNA's LoA confirms that the party fulfils the participation requirements and have approved and authorized the project and the project participants /CME. The DNA from Vietnam has confirmed that the project assists in achieving sustainable development.

The PoA correctly applies the baseline and monitoring methodology /B02/:

- AMS-III.AV Low greenhouse gas emitting safe drinking water production systems (Version 07.0)

The PoA will result in emissions reductions that are real, measurable and give long-term benefits to the mitigation of climate change. It is demonstrated that the PoA is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the PoA.

The validation did not reveal any information that indicates that the PoA can be seen as a diversion of ODA funding /05/.

The PoA-DD /02/ contains monitoring plan for the monitoring of the emission reductions from the PoA. The monitoring arrangement described in the monitoring plan is feasible within the project design and CCIPL is of opinion that the project participants are able to implement the monitoring plan.

The validation report describes a total of 17 findings, which include:

- 16 Corrective Action Requests (CARs);
- 01 Clarification Requests (CLs);
- 00 Forward Action Requests (FARs);

All findings are satisfactorily closed.

Carbon Check (India) Private Ltd. concludes the validation with a positive opinion that the CDM PoA “Viet Nam Clean Water Program” in Vietnam, as described in the PoA-DD /02/, meets all applicable CDM requirements, including those specified in the CDM Project Standard for PoAs /B01-b/, relevant methodologies /B02/ and article 12 of the Kyoto Protocol, paragraph 37 of the CDM modalities and procedures and the subsequent decisions by the COP/MOP and CDM Executive Board.

Carbon Check (India) Private Ltd., therefore requests the registration of the project activity as a CDM PoA with UNFCCC.

Appendix 1. Abbreviations

Abbreviations	Full Texts
BE	Baseline Emission
CAR	Corrective Action Request
CCIPL	Carbon Check (India) Private Ltd
CDM	Clean Development Mechanism
CDM EB	CDM Executive Board
CER	Certified Emission Reduction
CI	CPA implementer
CL	Clarification Request
CME	Co-ordinating or Managing Entity
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
COP/MOP	Conference of Parties/ Meeting of Parties
CPA	Component Project Activity
CPA-DD	Component Project Activity Design Document
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
EB	Executive Board
EIA	Environmental Impact Assessment
ER	Emission Reduction
FAR	Forward Action Request
GHG	Greenhouse Gas
GSC	Global Stakeholders Consultation
GWh	Giga Watt Hours
I	Interview
IPCC	Intergovernmental Panel on Climate Change
KCM	Korea Carbon Management Ltd.
kW	Kilo Watt
kWh	Kilo Watt Hours
LEy	Leakage
LoA	Letter of Approval
LSC	Local Stakeholder Consultation
MOC	Modalities of Communications
MoV	Means of Verification
MWh	Mega Watt Hours
NA	Not applicable
NCV	Net Calorific Value
ODA	Official Development Assistance
OSV	On Site Visit
PCP	Project Cycle Procedure
PE	Project Emission
PoA	Programme of Activities
PoA-DD	Programme of activities design document
POE	Point of Entry
POU	Point of Use
PP	Project Participant
PS	Project Standard
SD	Sustainable Development
SDWC	Safe Drinking Water Center
t	Tonne
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard

Appendix 2. Competence of team member and technical reviewers



Carbon Check (India) Private Ltd.

Vikash Kumar Singh

has been qualified as per CCIPL's internal qualification procedures, in accordance with requirements of Accreditation Standard (version 07.0):

For following functions:

Validator ☒ Team Leader ☒ Technical reviewer ☒
 Verifier ☒ Technical Expert ☒ Local Expert¹ ☒

In the following Technical Areas:

TA 1.1 ☒ TA 3.1 ☒ TA 5.2 ☐ TA 9.2 ☐ TA 13.2 ☒
 TA 1.2 ☒ TA 4.1 ☒ TA 8.1 ☐ TA 10.1 ☐ TA 14.1 ☐
 TA 2.1 ☐ TA 5.1 ☐ TA 9.1 ☐ TA 13.1 ☒

Mr. Amit Anand
CEO

Date of Approval
24/12/2018

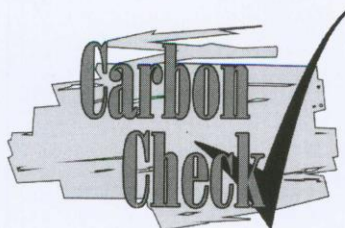
Valid Till
23/12/2019

Revision History of the Document

26/12/2014	Initial Adoption
24/12/2015	Annual Revision
20/01/2016	Interim Revision for office address change
23/12/2016	Annual Revision
24/12/2017	Annual Revision
24/12/2018	Annual Revision

¹ India, South Africa

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Carbon Check (India) Private Ltd.

Sanjay Agarwalla

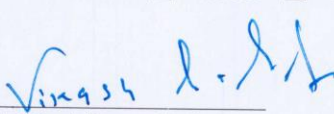
has been qualified as per CCIPL's internal qualification procedures, in accordance with requirements of Accreditation Standard (version 06.0):

For following functions:

Validator	<input checked="" type="checkbox"/>	Team Leader	<input checked="" type="checkbox"/>	Technical reviewer	<input checked="" type="checkbox"/>
Verifier	<input checked="" type="checkbox"/>	Technical Expert	<input checked="" type="checkbox"/>	Local Expert ¹	<input checked="" type="checkbox"/>

In the following Technical Areas:

TA 1.1	<input checked="" type="checkbox"/>	TA 3.1	<input checked="" type="checkbox"/>	TA 5.2	<input checked="" type="checkbox"/>	TA 9.2	<input checked="" type="checkbox"/>	TA 13.2	<input type="checkbox"/>
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TA 2.1	<input checked="" type="checkbox"/>	TA 5.1	<input checked="" type="checkbox"/>	TA 9.1	<input checked="" type="checkbox"/>	TA 13.1	<input checked="" type="checkbox"/>		


Mr. Vikash Kumar Singh
Compliance Officer


Mr. Amit Anand
CEO

Date of Approval
24/12/2018

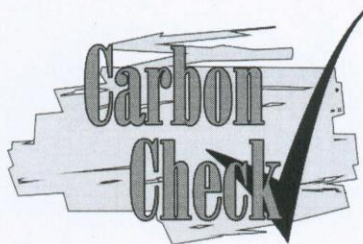
Valid Till
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Revision History of the Document

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23/12/2016	Annual Revision
24/12/2017	Annual Revision
24/12/2018	Annual Revision

¹ India

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Carbon Check (India) Private Ltd.

NGUYEN, HONG NGOC TRANG

has been qualified as per CCIPL's internal qualification procedures, in accordance with requirements of Accreditation Standard (version 07.0):

For following functions:

Validator	<input checked="" type="checkbox"/>	Team Leader	<input checked="" type="checkbox"/>	Technical reviewer	<input type="checkbox"/>
Verifier	<input checked="" type="checkbox"/>	Technical Expert	<input checked="" type="checkbox"/>	Local Expert ¹	<input checked="" type="checkbox"/>

In the following Technical Areas:

TA 1.1	<input type="checkbox"/>	TA 3.1	<input type="checkbox"/>	TA 5.2	<input type="checkbox"/>	TA 9.2	<input type="checkbox"/>	TA 13.2	<input type="checkbox"/>
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TA 2.1	<input type="checkbox"/>	TA 5.1	<input type="checkbox"/>	TA 9.1	<input type="checkbox"/>	TA 13.1	<input type="checkbox"/>		

Mr. Vikash Kumar Singh
Compliance Officer

Mr. Amit Anand
CEO

Date of Approval
24/12/2018

Valid Till
23/12/2019

Revision History of the Document

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24/12/2018	Annual Revision

¹ Brazil

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Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
/01/	CME	Webhosted PoA-DD	Version 01, dated 21/05/2019	CME
/02/	CME	Final PoA-DD	Version 04, dated 13 Aug 2019	CME
/03/	DNA	Letter of approval from host country Viet Nam	Approval No. 02/2019/DCC-BCD, dated 18 Apr 2019	CME
/04/	CME	a) Modalities of Communication b) Certificate of Incorporation of the entity signing the MOC c) Personal Identity proof of signatories signing the MOC d) Declaration by the CME inline with the requirements of paragraph 82 of CDM VVS for PoAs, version 02.0	Dated 12 Jun 2019	CME
/05/	CME	CME declaration for voluntary participation	Dated 13 Jun 2019	CME
/06/	CME	Evidence for the start date of the PoA – CDM PoA prior consideration Form	Dated 15 May 2019	CME
/07/	CME	CME management System Manual	Dated 10 Oct 2018	CME
/08/	CC IPL	Validation contract between the CME and DOE	Dated 15/05/2019	CME
/09/	CME	Local Stakeholder Consultation related evidences 1) Invitation letters 2) Stakeholder minutes of meeting 3) Photos of meeting 4) Meeting content	Dated 05 Oct 2018	CME
/10/	Vietnam Government	Evidence of no EIA required by local regulation	Decree No.40/2019/ND-CP dated 13/05/2019	CME
/11/	CME	1) Business License of INTRACO, No. 0102135422 2) Business License of KCM, No. 142-81-56603	1) Dated 02 Oct 2017 2) Dated 13 Jun 2019	CME
/12/	CME	Interim version of the PoA DD	1) Version 2, dated 23 Jul 2019 2) Version 03, dated 06/08/2019 (submitted to TR)	CME
/13/	CME	Grid Emission Factor Report approved by DNA Vietnam dated 29/03/2019	Dated 29/03/2019	CME
/14/	CME	QCVN 6-1:2010/BYT for drinking water	Dated 02/06/2010	CME
/B01/	UNFCCC	a) CDM Validation and Verification Standard for Program of Activities, Version 02.0 b) CDM Project Standard for Program of Activities, Version 02.0 c) CDM Project Cycle Procedure for Program of Activities, Version 02.0	http://cdm.unfccc.int/	Public

/B02/	UNFCCC	a) AMS-III.AV Low greenhouse gas emitting safe drinking water production systems -Version 7.0 b) AMS-I.E. Switch from non-renewable biomass for thermal applications by the user - Version 9.0	http://cdm.unfccc.int/	Public
/B03/	UNFCCC	Instructions for filling out the project design document form for CDM programme of activities (Version 08.1 and Version 09)	http://cdm.unfccc.int/	Public
/B04/	UNFCCC	Methodological Tool01: Tool for the demonstration and assessment of additionality, Version 7.0.0	http://cdm.unfccc.int/	Public
/B05/	UNFCCC	Methodological Tool 21: Demonstration of additionality of small scale project activities, Version 12.0	http://cdm.unfccc.int/	Public
/B06/	UNFCCC	Methodological Tool 27: Investment Analysis, Version 09.0	http://cdm.unfccc.int/	Public
/B07/	UNFCCC	Methodological Tool 07: Tool to calculate the emission factor for an electricity system, Version 07.0	http://cdm.unfccc.int/	Public
/B08/	UNFCCC	Methodological Tool 20: Assessment of debundling for small-scale project activities, Version 4.0	http://cdm.unfccc.int/	Public
/B09/	UNFCCC	Glossary of CDM Terms, Version 09.1	http://cdm.unfccc.int/	Public
/B10/	UNFCCC	General Guidelines to SSC CDM methodologies, Version 22.1	http://cdm.unfccc.int/	Public
/B11/	UNFCCC	Methodological Tool 03 - Tool to calculate project or leakage CO2 emissions from fossil fuel combustion - Version 03.0	http://cdm.unfccc.int/	Public
/B12/	UNFCCC	Methodological Tool 05 - Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation - Version 03.0	http://cdm.unfccc.int/	Public
/B13/	UNFCCC	Methodological Tool30 - Calculation of the fraction of non-renewable biomass - Version 02.0	http://cdm.unfccc.int/	Public
/B14/	UNFCCC	Guideline: Sampling and surveys for CDM project activities and programmes of activities (Version 04.0)	http://cdm.unfccc.int/	Public
/B15/	UNFCCC	Standard: Sampling and surveys for CDM project activities and programmes of activities (Version 07.0).	http://cdm.unfccc.int/	Public
/B16/	UNFCCC	Websites: http://cdm.unfccc.int/	http://cdm.unfccc.int/	Public

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

Table 1. CLs from this validation

CL ID	01	Section no.	D.2.5	Date: 05/07/2019
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Description of CL	
<p>As per paragraph 123 of Project Standard for PoA, version 02.0,</p> <p><i>"The coordinating/managing entity shall define the eligibility criteria for inclusion of CPAs in the proposed CDM PoA, setting out required conditions for a proposed CPA to be included in the PoA, and shall demonstrate the usability of the eligibility criteria for assessing the inclusion of CPAs in the PoA".</i></p> <p>In the context of eligibility criteria it is unclear to the validation team how the required conditions (including the supportive evidence) are set by the CME, while doing so please also refer to paragraph 124 (read with foot note 23 & 24) of Project Standard for PoA, version 02.0 .</p> <p>eligibility No 2 – Objective conditions to avoid double counting of GHG emission reductions is missing</p> <p>eligibility No 4 - Specification of the technology/measure such as the level and type of service, as well as performance specification based on, inter alia, testing/certification has not been provided</p> <p>eligibility No 7 – Conditions to ensure that CPAs meet the requirements for demonstration of additionality: Please clarify to the validation team, is the generic CPA is small scale in accordance with the eligibility thresholds in paragraph 126, PS-PoA?</p> <p>eligibility No 11 – Please include the conditions for the de-bundling check based on the "Methodology tool: Assessment of de-bundling for small scale project activities"</p> <p>Furthermore, the eligibility criteria on sampling as per paragraph 124 (I) of Project Standard for PoA, version 02.0 is missing.</p>	
CME response	Date: 23/07/2019
The eligibility No.2, 4,7, 11 (no. 11 of de-bundling check has been changed to No. 13) and the eligibility criteria on sampling as per paragraph 124 (L) of Project Standard for PoA, version 02.0 has been added in the PoA DD	
Documentation provided by CME	
Revised PoA DD, version 2, dated 23 Jul 2019	
DOE assessment	Date: 29/07/2019
<p>CME has submitted revised PoA-DD with appropriate correction which fulfil with paragraph 123 of Project Standard for PoA, version 02.0. Furthermore, section C and eligibility criteria number 7 has been revised to include simple cost analysis. The reference of obsolete document EB 68 Annex 27 has been removed in the revised PoA DD. In the opinion of validation team, since there are no other benefit (other than CDM), demonstration of additionality on simple cost analysis is appropriate.</p> <p>CL-01 is closed.</p>	

Table 2. CARs from this validation

CAR ID	01	Section no.	Date: 05/07/2019
Description of CAR			
The CDM-PoA-DD Form Version 08.1 is obsolete. CME/PP is requested to use valid version of the template as per the requirement of paragraph 22 PS-PoA Version 02.0.			
CME response			Date: 23/07/2019
The CDM – PoA-DD form has updated to Version 09.0			
Documentation provided by CME			
Revised PoA DD, version 2, dated 23 Jul 2019			
DOE assessment			Date: 29/07/2019
<p>CME has submitted revised PoA-DD with PoA-DD form, Version 09.0 which is the most updated template.</p> <p>CAR 01 is closed.</p>			

CAR ID	02	Section no.	D.1.2	Date: 05/07/2019
Description of CAR				
As per the PoA DD filling instructions, the coordinating/managing entity shall identify the Parties involved in the proposed CDM PoA, including the host Party(ies). The validation team did not find "Host party" in section A.5. of the PoA DD.				
CME response				Date: 23/07/2019
The word "Host party" has been added in section A.5 of the revised PoA DD				
Documentation provided by CME				
Revised PoA DD, version 2, dated 23 Jul 2019				
DOE assessment				Date: 29/07/2019
CME has submitted revised PoA-DD which clearly indicated "Host party" as requirement from PoA filling instruction.				
CAR 02 is closed.				

CAR ID	03	Section no.	D.1.3	Date: 05/07/2019
Description of CAR				
As the requirement of Instruction for completing CDM-PoA-DD-Form and paragraph 36 of PS-PoA (Version 02.0), a description on the CME Management system is required to be provided in the PoA DD. However, during review of Section B of the PoA-DD, the validation team did not find the below information:				
<ul style="list-style-type: none"> (a) A clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies. (b) Procedure for technical review of inclusion of CPAs. (c) Records and documentation control process for each CPA under the PoA. 				
CME response				Date: 23/07/2019
<p>The information of:</p> <ul style="list-style-type: none"> (a) A clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies. (b) Procedure for technical review of inclusion of CPAs (c) Records and documentation control process for each CPA under the PoA <p>have been added in the section B of the revised PoA - DD</p>				
Documentation provided by CME				
Revised PoA DD, version 2, dated 23 Jul 2019				
DOE assessment				Date: 29/07/2019
CME has submitted revised PoA-DD which clearly indicated the roles and responsibilities of personnel involved in the process of inclusion. Their competencies has documented in the section B. In addition, the procedure for technical review of CPA inclusion and records and documentation control process for each CPA under PoA has elaborated. The validation team has reviewed the documents, cross-checked with the CME Management System Manual and confirmed that the information was appropriately documented and fulfil the requirement of Instruction for completing CDM-PoA-DD-Form and paragraph 36 of PS-PoA (Version 02.0).				
CAR 03 is closed.				

CAR ID	04	Section no.	D.1.6	Date: 05/07/2019
Description of CAR				
Please justify the choice of level of environmental impact analysis in section E.1 of the PoA DD. The reason provided in the PoA-DD does not comply with the instruction requirement of PoA DD filling.				
CME response				Date: 23/07/2019

The reason for choosing of environmental impact analysis at PoA level has been updated in the PoA DD as "The technologies/measures to be implemented under this PoA are likely to be similar across all CPAs under the PoA and therefore, their environment impacts will not vary significantly. For this reason, it is reasonable to undertake a single environmental analysis at the level of the PoA rather than individual assessments for each SSC-CPA."

Documentation provided by CME

Revised PoA DD, version 2, dated 23 Jul 2019

DOE assessment

Date: 29/07/2019

CME has submitted revised PoA-DD and indicated that the environmental impact analysis will be conducted at PoA level and appropriately provide justification for it as the technologies/ measures to be implemented under this PoA are likely similar across all CPAs under this PoA. The validation team, by observation during the onsite visit, desk review and interview with relevant stakeholder, could be able to confirm that the choice is plausible and information is provided appropriately as the instruction requirement of PoA DD filling.

CAR 04 is closed.

CAR ID	05	Section no.	D.1.8	Date: 05/07/2019
Description of CAR				
Review of POA DD section F reveals that LSC has been opted at the PoA Level. However, no information has been provided either for the justification at the level it is conducted and the details of the LSC meeting.				
During the on-site inspection, validation team has reviewed the records of LSC meeting (dated 05/10/2018) and found that it has been conducted in Hoa Binh Province. The participation is mostly local people and relevant authority from Hoa Binh province. The validation team did not found that the stakeholder consultation as representation for the whole PoA.				
CME response				Date: 23/07/2019
The LSC has been re-selected as at the CPA level in the revised PoA DD.				
Documentation provided by CME				
Revised PoA DD, version 2, dated 23 Jul 2019				
DOE assessment				Date: 29/07/2019
CME has submitted revised PoA DD with the revision in the level of LSC. They selected to conduct LSC at the CPA level. This deemed plausible and appropriate.				
CAR 05 is closed.				

CAR ID	06	Section no.	D.2.1	Date: 05/07/2019
Description of CAR				
As per "Instruction for completing CDM-PoA-DD-Form" and requirement of paragraph 126, Project Standard for PoA, version 02.0, in section H.3 of the PoA DD , it is required to indicate the small-scale project type (Type I, Type II and/or Type III) applicable to the generic CPA. If applicable, indicate and demonstrate that the generic CPA qualifies for a microscale project type (Type I, Type II, Type III).				
The same is missing in the PoA DD.				
CME response				Date: 23/07/2019
The project type has been indicated and demonstrated in section H.3 of the revised PoA DD as type III				
Documentation provided by CME				
Revised PoA DD, version 2, dated 23 Jul 2019				
DOE assessment				Date: 29/07/2019
CME has submitted revised PoA DD with the indication and demonstration that the project type as type III. This is fulfilled with the "Instruction for completing CDM-PoA-DD-Form" and requirement of paragraph 126, Project Standard for PoA, Version 02.0.				
CAR 06 is closed.				

CAR ID	07	Section no.	D.2.1	Date: 05/07/2019
Description of CAR				
As per paragraph 81 of the Project Standard for PoA version 02.0 and the requirement of Instruction for completing CDM-PoA-DD-Form, section H.4 of PoA-DD should document:				
<ul style="list-style-type: none"> (i) A list of the facilities, systems and equipment that will be installed and/or modified by the corresponding CPAs; (ii) The types and levels of services provided by the facilities, systems and equipment and their relation, if any, to other facilities, systems and equipment outside the project boundary; (iii) The arrangement of the facilities, systems and equipment; (iv) The range of the age and average lifetime of the equipment based on the manufacturer's specifications and industry standards; (v) The range of the installed capacities, load factors and efficiencies; (vi) The energy and mass flows and balances of the facilities, systems and equipment, if necessary; (vii) The monitoring equipment and their location in the systems; 				
The validation team did not find these information in the PoA-DD.				
CME response				Date: 23/07/2019
The detailed description of the technology and equipment has been clear described in the section H.4 of the revised PoA DD				
Documentation provided by CME				
Revised PoA DD, version 2, dated 23 Jul 2019				
DOE assessment				Date: 29/07/2019
CME has submitted revised PoA DD with the detailed description of the technology and equipment. The validation team has reviewed the revised PoA-DD and cross-checked with the equipment contract and observation during on-site visit and confirmed that this has been correctly documented.				
CAR 07 is closed.				

CAR ID	08	Section no.	D.2.3	Date: 05/07/2019
Description of CAR				
Review of section I.2 of the PoA DD reveals the following findings:				
<ul style="list-style-type: none"> 1) CME/PP is requested to provide a justification for the paragraph 26 of AMS-III.AV, Version 07.0. 2) Please explain documentation that has been used for the justification and provide references to it. Demonstrate that the design of the generic CPA qualifies as Type I, Type II or/and Type III in accordance with the applicable provisions on small scale project type and eligibility in the project standard. 				
CME response				Date: 23/07/2019
Justification and more details have made for				
<ul style="list-style-type: none"> 1. the paragraph 26 of AMS-III.AV, Version 07.0 2. the justification and provide references to it 3. Demonstrated that the design of the generic CPA qualifies as Type I, Type II or/and Type III in accordance with the applicable provisions on small scale project type and eligibility in the project standard. 				
Documentation provided by CME				
Revised PoA DD, version 2, dated 23 Jul 2019				
DOE assessment				Date: 29/07/2019
CME has submitted revised PoA DD. Paragraph 26 of AMS-III.AV, version 07.0 has been included and justified in Section I.2. Applicability of methodology AMS-III.AV, version 07.0. CME has demonstrated that the design of the generic CPA qualified as Type III.				
CAR 08 is closed.				

CAR ID	09	Section no.	D.2.3.3	Date: 05/07/2019
Description of CAR				
<p>As per the PoA DD filling instructions, in section I.5 of the PoA DD, <i>CME/PP is requested to describe how to establish the baseline scenario for each corresponding CPA in accordance with applicable provisions for establishment and description of baseline scenarios in project standard and applied methodologies. Please also describe how the relevant national and/or sectoral policies; regulations and circumstances are to be taken into account in accordance with the project standard.</i></p> <p>The calculation of Baseline emission is not required in this section.</p>				
CME response				Date: 23/07/2019
<p>The calculation of Baseline emission has been removed and describe how to establish the baseline scenario for each corresponding CPA in accordance with applicable provisions for establishment and description of baseline scenarios in project standard and applied methodologies section I.5 of the revised PoA DD</p>				
Documentation provided by CME				
Revised PoA DD section I.5, version 2, dated 23 Jul 2019				
DOE assessment				Date: 29/07/2019
<p>CME has submitted revised PoA-DD. In section I.5, the baseline scenarios has been clearly described with taken into account the relevant national and sectoral policies, regulation. This is in line with methodology AMS-III.AV Version 07.0.</p> <p>CAR 09 is closed.</p>				

CAR ID	10	Section no.	D.2.3.4	Date: 05/07/2019
Description of CAR				
<p>In section I.6.1 of the PoA DD, as per the Instruction for completing CDM-PoA-DD-Form", the following is required to provided:</p> <p><i>"Explain how the methods or methodological steps in the applied methodologies, the applied standardized baselines and the other applied methodological regulatory documents, for calculating baseline emissions, project emissions, leakage emissions and emission reductions are applied to the generic CPA. Clearly state which equations will be used in calculating emission reductions for the corresponding CPAs.</i></p> <p><i>Explain and justify all relevant methodological choices, including:</i></p> <ul style="list-style-type: none"> (a) <i>Where the applied methodologies, or the other applied methodological regulatory documents include different scenarios or cases, indicate and justify which scenario or case applies to the generic CPA;</i> (b) <i>Where the applied methodologies, or the other applied methodological regulatory documents provide different options to choose from indicate and justify which option has been chosen for the generic CPA;</i> <p><i>Where the applied methodologies, the applied standardized baselines or the other applied methodological regulatory documents allow different default values indicate and justify which default value has been chosen for the generic"</i></p> <p>The present description in the PoA DD is in-sufficient.</p>				
CME response				Date: 23/07/2019
The Instruction for completing CDM-PoA-DD-Form has been complied				
Documentation provided by CME				
Revised PoA DD section I.6.1, version 2, dated 23 Jul 2019				
DOE assessment				Date: 29/07/2019
<p>In the revised PoA DD, section I.6.1, CME has clearly explain and justify all relevant methodological choices, explain how the methods or methodological steps in the applied methodologies and the other applied methodological regulatory documents, for calculating baseline emissions, project emissions, leakage emissions and emission reductions are applied to the generic CPA. It was clearly stated which equations will be used in calculating emission reductions for the corresponding CPAs.</p> <p>CAR 10 is closed.</p>				

CAR ID	11	Section no.	D.2.3.4	Date: 05/07/2019
Description of CAR				
As per the applied methodology, to calculate the Project Emission, TOOL05 "Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation" is required to be used.				
The validation team found the applied equation in section I.6.3 of the PoD DD is not inline with the TOOL05.				
CME response				Date: 23/07/2019
The applied methodology, to calculate the Project Emission, TOOL05 "Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation" as per AMS-III.AV has been updated				
Documentation provided by CME				
Revised PoA DD, version 2, dated 23 Jul 2019				
DOE assessment				Date: 29/07/2019
CME has revised the PoA-DD. CME has checked and find that the applied methodology used to calculate Project Emission is from TOOL 5 "Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation" /B12/. This is inline with the methodology AMS-III.AV Version 07.0.				
CAR 11 is closed				

CAR ID	12	Section no.	D.2.3.4	Date: 26/06/2019
Description of CAR				
In section I.6.3 of the PoA DD, the applied equation to calculate Emission Reduction does not comply with the equation of the applied methodology and TOOLS.				
Furthermore, as per the applied methodology, the leakage estimation shall be based as per paragraph 34 of AMS I.E., version 09.0.				
CME response				Date: 23/07/2019
The applied equation to calculate Emission Reduction comply with the equation of the applied methodology and TOOLS has been updated in the section I.6.3				
Documentation provided by CME				
The revised PoA DD section I.6.3, version 2, dated 23 Jul 2019				
DOE assessment				Date: 29/07/2019
CME has revised the PoA-DD. CME has applied the paragraph 34 of AMS.I.E, version 09.0 for calculate the leakage emission. The validation team has checked and find it is correctly applied.				
CAR 12 is closed				

CAR ID	13	Section no.	D.2.3.5	Date: 05/07/2019
Description of CAR				
Review of section I.7.2 of the PoA DD reveals that CME has fixed a value of 0.1 for the parameter "nwb". As per the applied methodology, any value to this parameter require justification and evidence.				
CME response				Date: 23/07/2019
The description of parameter "nwb" has been revised in the PoA DD				
Documentation provided by CME				
Revised PoA DD section I.7.2, version 2, dated 23 Jul 2019				
DOE assessment				Date: 29/07/2019

CME has revised the PoA-DD. As per the revised PoA-DD, the value of η_{wb} is not yet fixed at the PoA level. At the CPA level, the value of η_{wb} will be decided based on the default values of below options:

- (a) The efficiency of the water boiling system shall be established using representative sampling methods or based on referenced literature values (fraction), use weighted average values if more than one type of systems is encountered;
- (b) 0.10 default value may be optionally used if the replaced system or the system that would have been used is a three stone fire or a conventional system for woody biomass lacking improved combustion air supply mechanism and flue gas ventilation system that is without a grate as well as a chimney; for the rest of the systems using woody biomass 0.2 default value may be optionally used;
- (c) 0.5 default value may be used if the replaced system or the system that would have been used is a fossil fuel combusting system.

This is in line with the applied methodology AMS-III.AV Version 07.0. The evidence for the applied value will be justified and checked later at CPA level.

CAR 13 is closed.

CAR ID	14	Section no.	D.2.3.5	Date: 05/07/2019
Description of CAR				
As per the PoA DD filling instruction for each parameter under 1.7.1 of the PoA DD under row "QA/QC procedures": it is required to "describe the Quality Assurance (QA)/Quality Control (QC) procedures to be applied, including the calibration procedures, where applicable".				
Furthermore, following are the specific findings on the parameters:				
<ol style="list-style-type: none"> 1. CME has opted sampling for parameters (Py and m), however the monitoring methodology also requires sampling for the parameter "t" (which is missing in the PoA DD) as well as for the parameters "Check for SDW public distribution network" and "Quality of safe drinking water" 2. The compliance of paragraph 18 of the applied methodology for capping the drinking water per person per day is not dealt for the monitoring parameter "QPW_y" 				
CME response				Date: 23/07/2019
<ol style="list-style-type: none"> 1. The description of the Quality Assurance (QA)/Quality Control (QC) procedures have been added in the revised PoA DD. 2. Because the PoA activity is the installation of Safety Drinking Water Centers (SDWCs), so the monitoring parameter "t" and sampling the parameter "Check for SDW public distribution network" are not required. The sampling for the parameter "Quality of safe drinking water" has been added in section I.7.2 of revised PoA DD. 				
Description of parameter "QPW _y " has been added as per paragraph 18 of the applied methodology in the revised PoA DD.				
Documentation provided by CME				
Revised PoA DD section I.7.1, version 2, dated 23 Jul 2019				
DOE assessment				Date: 29/07/2019

1. CME has submitted the revised PoA-DD which provided sufficient information about QA/QC procedure. The validation team has reviewed and confirmed that it is plausible.
2. CME has revised the PoA-DD, in which they has removed the case of distributed Water Purification system. The PoA activity now is only installation of Safety Drinking Water Centers (SDWC). All of installed SDWCs will be equipped with a flow meter. Therefore, the parameter QPW_y will be measured directly using the continuous flow meters according to Option 1, paragraph 16 of AMS-III.AV, Version 07.0. Parameter “t” only needed in case CME applied option 2.1, paragraph 17 of AMS-III.AV, Version 07.0 for calculation of QPW_y; Parameter “QPW_{pp}” is needed in case CME applied option 2.2, paragraph 17 of AMS-III.AV, Version 07.0 for calculation of QPW_y. Since those options is not applicable, CME has removed those parameters out of monitoring plan.

PoA is installation of SDWCs which provide drinking water for end-user in a neighborhood, CME will “Check for SDW public distribution network” by obtaining yearly official letter and confirmation from that area authority. As the public distribution network is an infrastructure item which need the approval from local authority to be constructed, the validation team found that the confirmation from local authority is reliable to confirm the existence of SDW public distribution network.

Parameter “Quality of safe drinking water” has been sufficiently included in sampling plan. The validation team has checked and confirmed that this is complied with the applied methodology AMS-III.AV Version 07.0 and Standard “Sampling and surveys for CDM project activities and programme of activities”.

CAR 14 is closed

CAR ID	15	Section no.	D.2.3.5 & Appendix 6	Date: 30/07/2019
Description of CAR				
As per Paragraph 29, Guideline “Sampling and surveys for CDM project activities and programmes of activities”, Version 04, the sampling plan should contain information relating to:				
(A) Sampling design				
1. Objectives and reliability requirements				
2. Target population				
3. Sampling method				
4. Sample size				
5. Sampling frame				
(B) Data to be collected				
1. Field measurements				
2. Quality assurance/ quality control				
3. Analysis				
(C) Implementation plan				
After reviewing the sampling plan in the revised PoA-DD, the validation team found that there is some information did not document clearly. Please revisit and provide according to the requirement of Guideline “Sampling and surveys for CDM project activities and programmes of activities”, Version 04				
CME response				Date: 23/07/2019
The sampling plan have revised as per Paragraph 29, Guideline “Sampling and surveys for CDM project activities and programmes of activities”, Version 04 in section I.7.2 of updated PoA DD.				
Documentation provided by CME				
Revised PoA DD Version 3, dated 01 Aug 2019				
DOE assessment				Date: 29/07/2019

CME has revised the PoA-DD. As per the revised PoA-DD, a sampling plan has been elaborated in the PoA-DD according to the "Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities" Version 07.0/B15/.

The validation team has reviewed the sampling plan developed by the CME and confirms that it is in line with the recommended outline for a sampling plan as provided for in the guideline for sampling and surveys for CDM project activities and programme of activities version 04.0/B14/.

At the time of validation, the CME had not determined the sample size. Nevertheless, the PP has provided a guide/procedure including formulae that will enable estimation of the sample size. The validation team considers the guide to be sufficient to enable the DOE reproduce the sample size. Data to determine the relevant parameter required to estimate the sample size was not available at the time of validation. Data to determine sample size shall be reviewed at the CPA level.

The validation team's has assessed the proposed field measurements by reviewing the proposed data collection method and considers that the method is likely to provide reliable data.

The CME has provided a description of the implementation plan.

CAR 15 is closed

CAR ID	16	Section no.	TR comments	Date: 12/08/2019
Description of CAR				
<ol style="list-style-type: none"> 1. The font size and format in the PoA-DD should be as per the PoA DD template. 2. On cover page and other sections of the PoA-DD, title of the applied methodology, AMS-III.A.V has been incorrectly stated. 3. In section A.3 of the PoA-DD various water purification technologies have been stated whereas the eligibility criteria section and generic CPA only shows reverse osmosis as a technology. 4. In the PoA-DD, an obsolete standard of PoA has been referred. 5. In section C of the PoA-DD, target consumers have been stated as rural. In section K under eligibility criterion no. 10, it is stated "CPAs will target households, communities or SMEs". CME needs to confirm on target user and maintain consistency. 6. In section C of the PoA-DD, reference of additionality tool is missing. Please note that small scale additionality tool does not specifically refer to simple cost analysis. CME is also requested to confirm on the operational cost/revenues (if applicable). 7. In section H.4 of the PoA-DD, equipment lifetime is missing. 8. In section I.2 of the PoA-DD, the quoted methodology paragraphs should be verbatim as per the applied methodology. The present text is not matching with the applied methodology. 9. In section I.2 of the PoA-DD, under serial no. 3, WHO requirement is missing (which has been stated in section A.3 of the PoA-DD). 10. In section I.6.1 of the PoA-DD, PoA-DD completing guidelines has not been complied with which states: "Explain how the methods or methodological steps in the applied methodologies, the applied standardized baselines and the other applied methodological regulatory documents, for calculating baseline emissions, project emissions, leakage emissions and emission reductions are applied to the generic CPA. Clearly state which equations will be used in calculating emission reductions for the corresponding CPAs". 11. In section I.6.1 of the PoA-DD CME needs to confirm about the capping factor as required by paragraph 18 of the applied methodology. 12. In section I.6.2 of the PoA-DD, for the ex-ante parameter "nwb", default value has been stated. CME needs to clarify on this as section I.6.1 states: "The efficiency of the water boiling systems will be calculated via survey in the specific CP". Also please clearly state out of the three options provided by the methodology, which option shall be applied. 13. In section I.6.2 of the PoA-DD, for the ex-ante parameter "EFprojected fossilfuel", three fuels have been stated including coal. CME needs to confirm whether coal is the only fossil fuel to be replaced? 14. In section I.7.1 of the PoA-DD for the monitoring parameter "Py", CME needs to confirm the utility of the parameter and its measurement procedure in a transparent manner. 15. In section I.7.2 of the PoA-DD, CME needs to confirm on the compliance of paragraph 17 c of the sampling standard for all the monitoring parameters. 16. In section J of the PoA DD, CME needs to confirm on the compliance of paragraph 122 c of Project Standard for PoAs and also the SSC general guidelines which require CPA crediting period shall be 				

<p>within the life time of PoA.</p> <p>17. In section K of the PoA-DD, for eligibility criterion no.1, time induced boundary has been stated. CME is requested to clarify.</p> <p>18. Under eligibility criterion no. 5 in section K of the PoA-DD, CME needs to confirm on the choice of start date of PoA (GSC start date or intimation to UNFCCC on 15/05/2019)?.</p> <p>19. "Document Information history" table is missing at the end of the PoA-DD. Please note that the template of PoA DD can not be altered.</p>	
CME response	Date: 13/08/2019
<ol style="list-style-type: none"> The font size and format in the PoA-DD have been revised as per the PoA DD template. The title of the applied methodology, AMS-III.AV has been corrected as per Methodology. At this moment, the CME only considers to one water purification technology in the PoA, therefore, Section A.3 has been revised to match with the eligibility criteria section. CDM Project standard for programmes of activities." has been updated to document references. The target consumers are households, communities or SMEs in rural. This information is consistent all the whole of PoA DD. TOOL01 "Tool for the demonstration and assessment of additionality" has been added in the section C of revised PoA DD as per reference of additionality tool. The operational cost has been mentioned in the Section C of revised PoA DD. The performance specification and equipment lifetime have been added in section H.4 of revised PoA DD. The quoted methodology paragraphs have been revised verbatim as per the applied methodology in section I.2 of the PoA-DD, The drinking water must to meet national requirements (QCVN 6-1:2010/BYT). WHO requirements in section A.3 has been removed in revised PoA DD. Section I.6 has been revised to complied with the PoA-DD completing guidelines. The average volume of drinking water shall be not exceeded of 5.5 litres per person per day. This confirmation has been added in the section I.6.1 of revised PoA DD. "The efficiency shall be determined at the CPA level". This description has been added in the section I.6.2 of revised PoA DD. The selection of option has been made clear in the section I.6.2 of revised PoA DD. The PoA use two fuel including wood fuel and LPG, the ex-ante parameter "EF_{projected fossil fuel}" of these fuels have been stated in section I.6.2 of the PoA-DD. The monitoring and measurement procedure of parameter Py have been made clearly in section I.7.1 of revised PoA DD. The sampling for all the monitoring parameters has been revised to match with the compliance of paragraph 17c of sampling standard in section I.7.2 of the revised PoA-DD CPAs have a fixed crediting period. The length of the crediting period is 10 years and 0 month The crediting period of a CPA shall not exceed the end of the duration of the PoA. This description has been updated in the revised PoA DD. Eligibility criterion no.1 has been updated in the revised PoA DD. The start date of PoA is the date that the notification sent to UNFCCC on 15/05/2019. This confirmation has been added in criteria No.5 in section K of PoA DD. The "Document Information history" table has been added in the revised PoA DD. 	
Documentation provided by CME	
<i>Revised PoA DD</i>	
DOE assessment	Date: 13/08/2019
CME has addressed all the comments raised in the revised PoA DD;checked and confirmed by the validation team. CAR is closed.	

Table 3. FARs from this validation

FAR ID		Section no.		Date:
Description of FAR				
CME response				Date: DD/MM/YYYY
Documentation provided by CME				

DOE assessment	Date: DD/MM/YYYY

Appendix 5. PoA Validation Protocol

Table 1: CDM-POA-DD Requirements Checklist ((based on § 37 of the CDM Modalities and Procedures and on VVS , Project Standard and Project Cycle Procedure)				
Checklist	Comment	Ref.	Draft Conclusion	Final Conclusion
PART I. Programme of activities (PoA)				
SECTION A. General description of PoA				
A.1. Title of the PoA				
A.1.1.Are title, version number and the date of completion of PoA-DD given in section A.1 of the PoA-DD?	Yes, the validation team during document review of the PoA-DD and PoA-DD template compared the two documents and further verified from UNFCCC website to confirm that the project title, current version number and the date of the PoA-DD has been provided correctly in the section A.1 of the PoA-DD.	/01/ /02/ /B03/	OK	OK
A.2. Description of the PoA				
A.2.1. Has PoA-DD in section A.2 contains the description of the policy/measure or stated goal that the PoA seeks to promote in a transparent manner with sufficient reference of the policy/measure/stated goal if any?	Yes, the information provided in section A.2 of the PoA-DD appropriately and transparently describes the policy/measure or stated goal that the PoA seeks to promote.	/01/ /02/	OK	OK
A.2.2. Has PoA-DD in section A.2 contains a sufficient description of Framework for the implementation of the proposed PoA.?	Yes, the information contained provides a sufficient description of the framework for the implementation of the proposed PoA.	/01/ /02/	OK	OK
A.2.3.Has a confirmation been given that the proposed PoA is a voluntary action by the coordinating/managing entity?	Yes, the CME has provided confirmation along with valid evidence along with valid evidence ^{05/} that the proposed PoA is a voluntary action.	/01/ /02/	OK	OK
A.2.4. Does the PoA-DD in section A.2 contains a brief description of how the proposed PoA contributes to sustainable	The description of how the project contributes to the sustainable	/01/ /02/ /03/	OK	OK

development	development of the host country of Viet Nam has been appropriately described.			
A.2.5.Does the project qualify as a small scale CDM project activity as defined in decision 4 / CMP.1 annex II?	Yes	-	-	-
A.2.6. Has the latest version of the CDM-POA-DD form been applied?	No, the latest version of the CDM-PoA-DD-FORM has been used for drafting the PoA-DD. CAR 01 was raised	/01/ /02/ /B03/	CAR 01	OK
A.2.7. Has the CDM-POA-DD been duly filled in accordance with the latest guidance(s) and procedures and all information are consistently described?	Not yet CAR 02, CAR 03, CAR 04, CAR 05, CAR 06, CAR 07, CAR 09, CAR 10 was raised	/01/ /02/ /B03/	CAR 02, CAR 03, CAR 04, CAR 05, CAR 06, CAR 07, CAR 09, CAR 10	OK
A.2.8. Does the PoA-DD contains information that the CME wish to treat as confidential /proprietary? Has the proprietary information been provided in two different versions and considered as per CCIPL's procedures	No, the PoA-DD does not contain information that the CME wish to treat as confidential or proprietary.	/01/ /02/	OK	OK
A.3. CME and Participants of PoA and				
A.3.1 Has the CME and all project participants been listed in section A.3 of the PoA-DD? Note: The CME of the proposed PoA, as the entity which communicates with the Board; Project participants to the PoA (project participants may or may not be involved in one of the component project activities (CPAs) related to the PoA).	Yes, the validation team reviewed the PoA-DD and found that the section A.3 has listed the CME and PPs.	/01/ /02/	OK	OK
A.4 Party(ies)				
A.4.1.1 Have all host countries been correctly listed?	No, the current PoA did not indicated host country in the section CAR 02 was raised	/01/ /02/	CAR 02	OK
A.4.1.2 Is there any Party directly involved as project participant, and if yes, is that Party's contact details included in annex 1 of the PoA-DD?	N/A	/01/ /02/	OK	OK
A.4.1.3 Has the coordinating/managing entity obtained letters of approval for the implementation of the PoA from each Host Party and Annex I Party involved in the PoA? <i>Note: Letters of approval shall be issued in accordance with the</i>	Letter of Approval from the host party DNA was provided and found to be in accordance with the latest VVS requirement.	/01/ /02/	OK	OK

<i>guidance provided by the CDM Executive Board (EB16, Annex 6).</i>				
A.4.2. Do the written approvals confirm that the corresponding party is a Party to the Kyoto Protocol?	Yes	/01/ /02/	OK	OK
A.4.3. Are the approvals issued from organizations listed as DNAs on the UNFCCC CDM website? Indicate the means of validation employed to assess the authenticity, i.e. in case of doubt whether LoA has been verified with the DNA. Further describe which entity submitted the LoA for validation.	Yes	/01/ /02/	OK	OK
A.4.4. Do the written approvals confirm that the participation is voluntary?	Yes	/01/ /02/	OK	OK
A.4.5. Does the written approval from the host country confirm that the project contributes to the sustainable development in the /PoA-DD/country?	Yes	/01/ /02/	OK	OK
A.4.6. Do the written approvals refer to the precise project title in the PoA-DD submitted for registration or an additional specification of the project activity, e.g. PoA-DD version number?	Yes	/01/ /02/	OK	OK
A.4.7. Are the written approvals unconditional with regard to A.3.2, A.3.4 to A.3.6?	Yes	/01/ /02/	OK	OK
A.4.8. Has the coordinating/managing entity obtained letters of authorization of its coordination of the PoA from each Host Party? <i>The authorizations for the coordination of the PoA can be granted vide the letters of approval from each Host Party.</i>	Yes	/01/ /02/	OK	OK
A.4.9. Is the information regarding the project participants listed in section A3 and in Annex 1 of the PoA-DD internally consistent to each other?	Yes, the information regarding the project participants listed in section A.3 and in Annex 1 of the PoA-DD is internally consistent to each other.	/01/ /02/	OK	OK
A.4.10. Has the participation to the PoA of each project participant listed in the PoA-DD been approved by at least one Party involved? <i>Indicate whether the participation of the project participant(s) has been approved by a Party to the Kyoto Protocol. Describe the means of validation employed to draw this conclusion.</i>	Yes	/01/ /02/	OK	OK
A.4.11. Are there any other project participants approved but not listed in the PoA-DD?	N/A	/01/ /02/	-	-
A.5 Location of PoA				

A.5.1. Has the location (in terms of a geographical area for e.g. municipality, region within a country, country or several countries within which all CPAs to be included of the PoA been correctly described?	Yes, the validation team confirms that the host country (Viet Nam) is listed in section A.5 of the webhosted PoA-DD as the location of the PoA.	/01/ /02/	OK	OK
A.5.2 Does the CDM-PoA-DD include a definition of the boundary for the PoA in terms of a geographical area (e.g., municipality, region within a country, country or several countries) within which all CPAs included in the PoA will be implemented?	Yes, the validation team confirms that PoA-DD has included the national boundary of Viet Nam within all future CPAs shall be implemented.	/01/ /02/	OK	OK
A.5.3 Are all applicable national and/or sectoral policies and regulations within that chosen boundary reflected in the determination of the baseline?	No, the all applicable national and/or sectoral policies and regulations within chosen boundary has not yet been reflected in the determination of baseline. CAR 09 was raised	/01/ /02/	CAR 09	OK
A.6. Technologies/measures of the PoA				
A.6.1 Does the PoA-DD contain a clear, accurate and complete description of the CPAs with regard to the technology / measures to be used?	The PoA-DD does not contain a clear, accurate and complete description of the CPAs with regard to the technology / measures to be used. CAR 07 was raised	/01/ /02/	CAR 07	OK
A.6.2 Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country?	Yes, the project is saving fossil fuel using for water boiling due to low emitting water purification technology. The technology results in a significantly better environmental performance and contributes more to sustainability than any commonly used technologies in the host country.	/01/ /02/	OK	OK
A.7. Public funding of PoA				
A.7.1 Is the PoA involves public funding?	No, the validation team reviewed the PoA-DD and Declaration on public funding' and confirms that PoA does not involve diversion of public funding from Annex-I parties.	/01/ /02/	OK	OK
A.7.2 Is there a confirmation that official development assistance has not been diverted to the implementation of the PoA in case public funding is used?	Please refer assessment above.	/01/ /02/	OK	OK

SECTION B. Demonstration of additionality and development of eligibility criteria				
B.1. Demonstration of additionality for PoA				
B.1.1 Has it been demonstrated by the CME that describe how in the absence of CDM, none of the implemented CPAs would occur.	Yes. CME has demonstrated additionality of the PoA in line with "Standard- CDM Project Standard for Programme of Activities", version 02.0.	/01/ /02/ /B01/	OK	OK
B.2. Eligibility criteria for inclusion of a CPA in the PoA				
B.2.1. Has the eligibility criteria for inclusion of a CPA under the PoA included in the PoA-DD as per "Standard- CDM Project Standard for Programme of Activities", version 02.0.	Subject to closure of CL 01 CL 01 was raised	/01/ /02/ /B01/	CL-01	OK
Note: Validation team based on its expertise in the sectoral scope and any PoA specific requirement can confirm the requirement of any other eligibility criteria. Please provided assessment for each of the eligibility criteria, the eligibility criteria shall cover as a minimum the following :				
(a)The geographical boundary of the CPA including any time-induced boundary # consistent with the geographical boundary set in the PoA. # For example, an emission factor for electricity generation is dependent on the boundaries of regional or state or sub-regional grids.	The geographical boundary of the POA is Viet Nam and has been clearly defined in the eligibility criteria.	/01/ /02/ /B01/	OK	OK
(b) Conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (e.g. programme logo);	Conditions to avoid double counting have been clearly defined in the eligibility criteria. However, objective conditions to avoid double counting is missing CL 01 was raised	/01/ /02/ /B01/	CL-01	OK
(c) The specifications of technology/measure # including the level * and type of service, performance specifications including compliance with testing/certifications; # Specifications of the technology/measure shall include the type, capacity and other key features of the design of the systems. For example, indicating the installed capacity (in kW), size or dimensions, fixed/portable operation, and other key design	The specifications of technology/measure have not been clearly defined in the eligibility criteria especially the performance specification. CL 01 was raised	/01/ /02/ /B01/	CL-01	OK

features that makes the project cook stoves efficient, would be appropriate; however, only indicating that all cook stoves will have an efficiency X% would not be sufficient.				
* The level of service shall be defined in comparison with the baseline system being replaced.				
(d) Conditions to check the start date of the CPA through documentary evidence;	Conditions to check the start date of the CPA through documentary evidence has been clearly defined in the eligibility criteria.	/01/ /02/ /B01/	OK	OK

(e) Conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by CPAs;	Conditions to ensure meth applicability compliance have not yet been clearly defined in the eligibility criteria. CL 01 was raised.	/01/ /02/ /B01/	CL-01	OK
(f) The conditions that ensure that the CPA meets the requirements pertaining to the demonstration of additionality as assessed in section B.1 above;	The additionality requirements have been clearly defined in the eligibility criteria.	/01/ /02/ /B01/	OK	OK
(g) The PoA-specific requirements stipulated by the CME including any conditions related to undertaking local stakeholder consultations and environmental impact analysis;#	The PoA specific requirements like LSC and EIA have been clearly defined as not required according to local regulation in the eligibility criteria.	/01/ /02/ /B01/	OK	OK
# See also relevant paragraphs of “CDM project cycle procedure”.				
(h) Conditions to provide an affirmation that funding from Annex I Parties, if any, does not result in a diversion of official development assistance;	The criterion for non diversion of ODA funding from Annex 1 party has been clearly defined in the eligibility criteria.	/01/ /02/ /B01/	OK	OK
(i) Where applicable, target group (e.g. domestic/commercial/industrial, rural/urban, grid-connected/off-grid) and distribution mechanisms (e.g. direct installation) \$;	Target groups have been clearly defined in the eligibility criteria.	/01/ /02/ /B01/	OK	OK
\$ This is to re-test the validity of assumptions made at the PoA level. For example, in a lighting efficiency application, lighting usage hours of 3.5 hours per day would be valid if the target group is residences/households. Usage hours would be different in commercial applications and vice versa.				
(j) Where applicable, the conditions related to sampling requirements for the PoA in accordance with the “Standard for sampling and surveys for CDM project activities and programme of activities”;	Sampling is required. But the criteria for this is missing CL 01 was raised	/01/ /02/ /B01/	CL-01	OK
(k) Where applicable, the conditions that ensure that every CPA meets the small- scale or microscale threshold # and remains within those thresholds throughout the crediting period of the CPA. However, for a CPA that consists of only units that qualify as ‘microscale CDM units’ as defined in the methodological tool “Demonstration of additionality of microscale project activities”, this condition is not required;	Micro scale or small scale threshold criteria has not been clearly defined in the eligibility criteria. CL 01 was raised and closed satisfactorily.	/01/ /02/ /B01/	CL-01	OK

# Please refer to the latest approved version of the Standard- CDM Project Standard for Programme of Activities”				
(l) Where applicable, the requirements for the debundling check, in case the CPA belongs to small-scale or microscale project categories #. However, if a CPA solely consists of ‘microscale CDM units’, the requirement regarding debundling is not applicable.	Debundling criteria has not yet been clearly defined in the eligibility criteria. CL 01 was raised and closed satisfactorily.	/01/ /02/ /B01/	CL-01	OK
# Please refer to the latest approved version of Standard- CDM Project Standard for Programme of Activities”				
B.3. Application of methodologies				
B.3.1 Does the PoA-DD contains description of the technology/measures and indicated the methodology chosen?	The validation team reviewed the PoA-DD and confirms that description of the technologies/measures as appropriate and in conformance with the requirements of the PoA-DD form filling guidelines.	/01/ /02/ /B02/	OK	OK
B.3.2 In cases of multiple technologies/measures or multiple methodologies are being applied, does the PoA-DD list all the combinations of technologies/measures and methodologies that will be used in the PoA?	N/A	/01/ /02/	NA	NA
B.3.3 In case of sampling plan (If applicable), does the PoA-DD provide a description to demonstrate how it meets applicable provisions in the Standard for sampling and surveys for CDM project activities and programme of activities.	Yes, subject to closure of CAR 14.	/01/ /02/	CAR-14	OK
SECTION C. Management system				
C.1 Does the PoA-DD contains the description of the CME’s management system in line with Standard- CDM Project Standard for Programme of Activities”?	The description of management system provided by CME in section C of the PoA-DD is not sufficient and complete in regards to the requirements of latest version of the project standard. CAR 03 was raised.	/01/ /02/ /B01/	CAR-03	OK
SECTION D. Duration of PoA				
D.1. Starting Date of the PoA				
D.1.1. What is the starting date of the PoA? Is it Reasonable and does the PoA-DD provides how the start date was determined?	Start date have been clearly defined and in accordance with the CDM	/01/ /02/ /B01/	OK	OK

	Glossary term, Ver 09.1			
D.2. Length of the PoA <i>The length of the PoA shall be assessed</i>	The validation team confirms that the length of the PoA, as mentioned in section D.2 of the webhosted PoA-DD, is 28 years and in conformance with the requirements stipulated in CDM PS version 02.0.	/01/ /02/ /B01-b/	OK	OK
D.2.1. What is the length/lifetime of the PoA? Is it reasonable? <i>PoA duration should not exceeding 28 years (60 years for A/R)</i>	The validation team confirms that the length of the PoA, as mentioned in section D.2 of the webhosted PoA-DD is 28 years and deemed to be reasonable. This is and in conformance with the requirements stipulated in CDM PS version 02.0.	/01/ /02/ /B01-b/	OK	OK
E. Environmental Analysis				
E.1. Level of Analysis <i>The analysis shall be carried out either on PoA or CPA level</i>				
E.1.1.Has it been clearly indicated on which level i.e. PoA or CPA an environmental Analysis has been carried out or will be carried out?	<p>Yes, it has been clearly stated in section E of the PoA-DD that the environmental analysis is done at PoA level. The validation team deems it to be appropriate and in conformance with the requirements of the CDM PS, Version 02.0.</p> <p>However, the justification of choice was not clear documented.</p> <p>CAR 04 was raised.</p>	/01/ /02/ /B01-b/	CAR 04	OK
E.2. Documentation on the analysis of the environmental impacts				
C.2.1. Has an environmental analysis of the PoA as per requirements of the CDM modalities and procedures been undertaken and described in the CDM-POA-DD?	Refer to comments in section E.1.	/01/ /02/ /B01-b/	OK	OK
E.3 Environmental impact Analysis Requirements				
E.3.1. Are there any Host Party requirements for an Environmental Impact Assessment (EIA)?	No, host party does not require for Environmental Impact Assessment.	/01/ /02/ /B01-b/	OK	OK
E.3.2. In case an Environmental Impact Assessment (EIA) is	N/A	/01/ /02/	N/A	N/A

requested by the host party, has it been carried out and if applicable duly approved?		/B01-b/		
E.3.3. Are trans boundary environmental impacts considered in the analysis?	Refer to comments in section E.1	/01/ /02/ /B01-b/	OK	OK
F. Stakeholders' comments				
F.1. Level of Analysis				
F.1.1. Has it been clearly indicated on which level i.e. PoA or CPA stakeholder comments have been or will be invited?	Yes, it has been clearly stated in section E of the PoA-DD that the local stakeholder consultation has been at PoA level. However, the validation team deems it to be in-appropriate as the LSC meeting was organized for stakeholder in one province only. CAR 05 was raised.	/01/ /02/ /09/ /B01-b/	CAR-05	OK
F.2. Brief description how comments by local stakeholders have been invited and compiled.				
F.2.1. With regard to the PoA, how have local stakeholders' comments been invited prior to the publication of the PDDs and summarized? If applicable, was due account taken of the comments received?	Yes the local stakeholders' comments been invited prior to the publication of the PDDs. However, the scope of LSC is not appropriate for PoA level. CAR 05 was raised.	/01/ /02/ /09/ /B01-b/	CAR-05	OK
F.3. Summary of the comments received				
F.3.1. With regard to the PoA, can the summary provided assessed as adequate?	Refer to comment on Section F.1. CAR 05 was raised.	/01/ /02/ /09/ /B01-b/	CAR-05	OK
F.4. Report on how due account was taken of comments received				
F.4.1. With regard to the PoA, can the report provided assessed as adequate?	Refer to comment on Section F.1. CAR 05 was raised.	/01/ /02/ /09/ /B01-b/	CAR-05	OK
F.4.2. With regard to the PoA, can the local stakeholder consultation process in general be assessed as adequate?	Refer to comment on Section F.1. CAR 05 was raised.	/01/ /02/ /09/ /B01-b/	CAR-05	OK
SECTION G. Approval and authorization				
G.1 Does the PoA-DD indicates and included the letter(s) of approval from Party (ies) which wishes to be involved in the PoA, and whether it is available at the time of submitting the PoA-DD to	N/A	/01/ /02/	N/A	N/A

the validating DOE.				
Note: CME letters of authorization of its coordination of the PoA from each Party shall also been included.				
PART II. Generic component project activity (CPA)				
A.1. Purpose and general description of generic CPAs				
A.1.1 Has PoA-DD in section A.1 contains the description of the description of each generic CPA within the PoA?	There is only one technology/measure in the PoA. PP has provided a separate generic CPA-DD for each of the proposed technology/measure in the PoA, in accordance with the requirements of CDM Project Standard, Version 02.0.	/01/ /02/	OK	OK
SECTION B. Application of a baseline and monitoring methodology				
B.1.1. Does the PoA apply an approved and applicable CDM methodology and a valid version thereof?	Yes, the validation team confirms that the PoA-DD refers to an approved and valid version of the applicable CDM methodologies.	/01/ /02/ /B02/	OK	OK
B.1.2. Does the typical CPA apply one of the approved small scale categories and any methodology and tool referred therein?	Yes	/01/ /02/ /B02/	OK	OK
B.2. Justification of the choice of the methodology				
B.2.1. Is the justification of the choice of an approved baseline and monitoring methodology for the typical CPA sufficient?	Yes, the justification of the choice of an approved baseline and monitoring methodologies for the typical CPA is found to be sufficient.	/01/ /02/ /B02/	OK	OK
B.2.2. Does a typical CPA apply a combination of approved methodologies? If so, has such combination been approved only once in accordance with "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities", version 04.	N/A	/01/ /02/ /B02/	NA	OK
B.2.3. Are all applicability criteria in the methodology, the applied tools or any other methodology component referred to therein fulfilled? Has the CME Justified the choice of the selected methodology (ies) by showing that each generic CPA meets each applicability condition of the methodology (ies)? Does documentation that has been used as a basis of justification provided or referenced in the PoA-DD. If applicable, does the PoA-DD provide a general description of the sampling plan?	Yes, all applicability criteria in the methodology, the applied tools or any other methodology component referred to therein are fulfilled. The CME has appropriately justified the choice of the selected methodologies by showing that each generic CPA meets each applicability condition of the methodology. The documentation that has been	/01/ /02/ /B02/	CAR-08	OK

	used as a basis of justification has been referenced in the PoA-DD. CAR 08 was raised.			
B.3. Description of the sources and gases included in the boundary				
B.3.1. Are the CPA's spatial boundaries (geographical) of the CPAs to be included are clearly defined?	Yes, geographical special boundaries of the CPAs to be included are clearly defined.	/01/ /02/ /B02/	OK	OK
B.3.2. Are all sources and GHGs included in the project boundary as required in the applied methodology?	Yes, all sources and GHGs included in the project boundary are as required in the applied methodologies.	/01/ /02/ /B02/	OK	OK
B.3.3. In case the methodology allows to choose whether a source and/or gas is to be included, is the choice sufficiently explained and justified?	Yes	/01/ /02/	OK	OK
B.4. Description of how the baseline scenario is identified and description of baseline scenario				
<i>The description shall be assessed</i>				
B.4.1. Does the PoA-DD make provisions to identify possible baseline scenarios to be considered for CPAs?	Yes, the baseline scenario has been demonstrated in conformance with the appropriate requirements of the applied methodology. CAR 09 was raised.	/01/ /02/ /B02/	CAR 09	OK
B.4.2. Does the PoA-DD make provisions to identify the list of all the alternatives? Is the list of alternatives complete?	NA	/01/ /02/	OK	OK
B.4.3. Does the PoA-DD make provisions to identify the baseline scenario for each CPA?	NA	/01/ /02/	OK	OK
B.4.4. Does the PoA-DD make provisions to identify the baseline scenario according to the methodology for each CPA?	NA	/01/ /02/	OK	OK
B.4.5. Does the PoA-DD make provisions that any plausible alternative scenario is not excluded?	NA	/01/ /02/	OK	OK
B.4.6. Does the baseline alternatives sufficiently take into account relevant national and/or sectoral policies?	NA	/01/ /02/	OK	OK
B.4.7. Are the provisions for the baseline scenario determination compatible with the available data and are all literature and sources clearly referenced?	NA	/01/ /02/	OK	OK
B.5. CPA additionality				

B.5.1. Assessment and demonstration of CPA additionality	Yes	/01/ /02/ /B01/	OK	OK
<p>B.5.1.1. Does the PoA-DD makes provisions to describe the additionality demonstration approach for each generic CPA to meet the eligibility criteria of the PoA including confirmation of additionality of the generic CPA for its inclusion into the PoA.</p> <p>Does the demonstration follows the requirements of the applied methodology and/or other methodological tools?</p> <p>Note: Refer to “Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities, for additionality requirement for the PoA. In case of PoA of having small scale CPAs, the demonstration compliance shall be checked against the requirement of attachment A to appendix B. For PoAs utilizing large scale methodology, additionality tool shall be referred.</p>	Yes	/01/ /02/ /B01/	OK	OK
B.5.1.2. Which criteria have been established to assess the additionality of CPA under this PoA?	Yes	/01/ /02/ /B01/	OK	OK
Investment Analysis				
B.5.1.3. Does the PoA-DD provide criteria to assess that the proposed CPA of the PoA would not be the most economically or financially attractive alternative or economically / financially feasible without the revenues from the sale of CERs?	NA	/01/ /02/	OK	OK
B.5.1.4. Is the type of investment analysis selected correctly?	NA	/01/ /02/	OK	OK
B.5.1.5. Is the selected financial indicator chosen and applied correctly, if applicable?	NA	/01/ /02/	OK	OK
B.5.1.6. If applicable, were the input values used in the investment analysis valid and applicable at the time of the investment decision and justified?	NA	/01/ /02/	OK	OK
B.5.1.7. If CME proposes to use values from Feasibility Study Reports (FSR) is it possible to verify that the period between the FSR date and investment decision was reasonably short and FSR values did not change materially?	NA	/01/ /02/	OK	OK
B.5.1.8. Is it reasonable to assume that no investment would be made at a rate of return lower than the benchmark by, for example, assessing previous investment decisions by the project participants or some verifiable circumstances that have lead to a change in the benchmark?	NA	/01/ /02/	OK	OK
B.5.1.9. Is the Investment Analysis prepared in compliance with	N/A	/01/ /02/	OK	OK

the latest version of the "Guidance on the Assessment of Investment Analysis" as provided by the CDM EB?	NA			
Barrier Analysis				
B.5.1.10. If applicable, are there any issues addressed in the barrier analysis that have a clear impact on the financial viability of the project activity and that shall be assessed by an investment analysis?	NA	/01/ /02/	OK	OK
B.5.1.11. If applicable, Do the listed barriers exist and is their existence substantiated? Note: (a) by independent sources of data such as relevant national legislation, surveys of local conditions and national or international statistics and/or (b) by interviews with relevant individuals: including members of industry associations, government officials or local experts if necessary?	NA	/01/ /02/	OK	OK
B.5.1.12 Would any of the identified barriers prevent the implementation of the project activity but not equally prevent the implementation of the possible alternatives, in particular the implementation of the identified baseline scenario?	NA	/01/ /02/	OK	OK
Common Practice Analysis				
B.5.1.13. Are the geographical boundaries for the common practice analysis identified correctly?	NA	/01/ /02/	OK	OK
B.5.1.14. Does the PoA-DD provides an explanation why this region was selected and deemed more appropriate and is this explanation traceable and reliable?	NA	/01/ /02/	OK	OK
B.5.1.15Are there similar operational project activities, other than CDM activities, "widely observed and commonly carried out" in the defined region? Note: Use official sources and local and industry expertise?	NA	/01/ /02/	OK	OK
B.5.1.16. In case there are similar commercially operated project activities, other than CDM activities, already "widely observed and commonly carried out" in the defined region, are there essential distinctions between the CDM project activity and the other similar activities?	NA	/01/ /02/	OK	OK
B.6. Estimation of Emission Reductions of CPA				
B.6.1. Explanation of methodological choices				
B.6.1.1. In case the methodology allows for different methodological choices, are the equations applied properly justified and have they been used reflecting the other methodological choices (i.e. baseline identification)?	yes	/01/ /02/ /B02/	OK	OK

B.6.2. Equations, including fixed parametric values used for ER calculation										
B.6.2.1. Are the equations applied correctly according to the applied approved methodology?	No, the validation team reviewed the PoA-DD and after comparing it with the applied methodologies confirms that the equations provided in section B.6.1 have not yet been appropriately applied and in conformation with the applied methodologies. CAR 11, CAR 12 were raised.	/01/ /02/ /B02/	CAR 11 CAR 12	OK						
B.6.2.2. Have conservative assumptions been used when calculating the project emissions?	No, the validation team found that the equation has been used to calculate project emissions is not accordance to the TOOL CAR 11 was raised.	/01/ /02/ /B02/	CAR 11	OK						
B.6.3. Data and parameters to be reported in the CPA-DD form										
B.6.3.1. Are provisions made to identify all data and parameters which remain fixed throughout the crediting period correct, applicable to the project and will lead to a conservative estimation of emission reductions?	No, all data and parameters, which remain fixed throughout the crediting period not yet have been identified in this section. As the calculation equation is not yet corrected. The parameter TDL is missing. Subject to closure of CAR 11.	/01/ /02/ /B02/	CAR 11	OK						
B.6.3.2. Is the list of parameters presented in section I.6.2 (Part II of PoA-DD) considered to be complete with regards to the requirements of the applied methodology? <i>P.S.: Provide assessment for each of the ex-ante parameters below using separate rows.</i>	Yes, the PoA-DD mentions reasonable values for all ex-ante calculation / monitoring parameters.	/01/ /02/ /B02/	OK	OK						
B.6.3.2.1. Life Span of water treatment technologies LS	<table><tr><th>Monitoring Checklist</th><th>Yes / No / NA</th></tr><tr><td>Title and description in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly</td><td>Yes</td></tr></table>	Monitoring Checklist	Yes / No / NA	Title and description in line with methodology?	Yes	Data unit correctly	Yes	/01/ /02/	OK	OK
Monitoring Checklist	Yes / No / NA									
Title and description in line with methodology?	Yes									
Data unit correctly	Yes									

	stated?				
	Source clearly referenced?	Yes			
	Correct value provided for estimation?	N/A			
	Has this value been verified?	N/A			
	Measurement method and procedure correctly described?	N/A			
	Purpose of data correctly described	N/A			
	Additional comments (if any)	Yes			
B.6.3.2.2. Efficiency of water boiling systems being replaced η _{wb}	Monitoring Checklist	Yes / No / NA	/01/ /02/	CAR 13	OK
	Title and description in line with methodology?	Yes			
	Data unit correctly stated?	Yes			
	Source clearly referenced?	Yes			
	Correct value provided for estimation?	N/A			
	Has this value been verified?	N/A			
	Measurement method and procedure correctly described?	N/A			
	Purpose of data correctly described	Yes			
	Additional comments (if any)	N/A			

B.6.3.2.3. Proportions of baseline fuel type i (NBR and or fossil fuels) $BL_{fuel, i}$	Monitoring Checklist	Yes / No / NA	/01/ /02/	OK	OK
	Title and description in line with methodology?	Yes			
	Data unit correctly stated?	Yes			
	Source clearly referenced?	Yes			
	Correct value provided for estimation?	N/A			
	Has this value been verified?	N/A			
	Measurement method and procedure correctly described?	N/A			
	Purpose of data correctly described	Yes			
	Additional comments (if any)	N/A			
	B.6.3.2.4. Factor to determine amount of non-renewable fuels f_i	Monitoring Checklist			
Title and description in line with methodology?		Yes			
Data unit correctly stated?		Yes			
Source clearly referenced?		Yes			
Correct value provided for estimation?		N/A			
Has this value been verified?		N/A			

	Measurement method and procedure correctly described?	N/A			
	Purpose of data correctly described	Yes			
	Additional comments (if any)	N/A			
B.6.3.2.5. Emission factor for the substitution of non-renewable woody biomass $EF_{\text{projected, fossil fuel, i}}$	Monitoring Checklist	Yes / No / NA	/01/ /02/	OK	OK
	Title and description in line with methodology?	Yes			
	Data unit correctly stated?	Yes			
	Source clearly referenced?	Yes			
	Correct value provided for estimation?	Yes			
	Has this value been verified?	N/A			
	Measurement method and procedure correctly described?	N/A			
	Purpose of data correctly described	Yes			
	Additional comments (if any)	Yes			
B.6.3.2.6. Fraction of the population serviced by the project activity for which the common practice of water purification is or would have been water boiling X_{boil}	Monitoring Checklist	Yes / No / NA	/01/ /02/	OK	OK
	Title and description in line with methodology?	Yes			
	Data unit correctly stated?	Yes			
	Source clearly	Yes			

	<table border="1"> <tr><td>referenced?</td><td></td></tr> <tr><td>Correct value provided for estimation?</td><td>N/A</td></tr> <tr><td>Has this value been verified?</td><td>N/A</td></tr> <tr><td>Measurement method and procedure correctly described?</td><td>N/A</td></tr> <tr><td>Purpose of data correctly described</td><td>Yes</td></tr> <tr><td>Additional comments (if any)</td><td>No</td></tr> </table>	referenced?		Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method and procedure correctly described?	N/A	Purpose of data correctly described	Yes	Additional comments (if any)	No									
referenced?																						
Correct value provided for estimation?	N/A																					
Has this value been verified?	N/A																					
Measurement method and procedure correctly described?	N/A																					
Purpose of data correctly described	Yes																					
Additional comments (if any)	No																					
B.6.3.2.7. Emission factor for electricity generation for source j in year y	<table border="1"> <tr><td>Monitoring Checklist</td><td>Yes / No / NA</td></tr> <tr><td>Title and description in line with methodology?</td><td>Yes</td></tr> <tr><td>Data unit correctly stated?</td><td>Yes</td></tr> <tr><td>Source clearly referenced?</td><td>Yes</td></tr> <tr><td>Correct value provided for estimation?</td><td>N/A</td></tr> <tr><td>Has this value been verified?</td><td>N/A</td></tr> <tr><td>Measurement method and procedure correctly described?</td><td>N/A</td></tr> <tr><td>Purpose of data correctly described</td><td>Yes</td></tr> <tr><td>Additional comments (if any)</td><td>No</td></tr> </table>	Monitoring Checklist	Yes / No / NA	Title and description in line with methodology?	Yes	Data unit correctly stated?	Yes	Source clearly referenced?	Yes	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method and procedure correctly described?	N/A	Purpose of data correctly described	Yes	Additional comments (if any)	No	/01/ /02/	OK	OK
Monitoring Checklist	Yes / No / NA																					
Title and description in line with methodology?	Yes																					
Data unit correctly stated?	Yes																					
Source clearly referenced?	Yes																					
Correct value provided for estimation?	N/A																					
Has this value been verified?	N/A																					
Measurement method and procedure correctly described?	N/A																					
Purpose of data correctly described	Yes																					
Additional comments (if any)	No																					
B.6.3.2.8. Average technical transmission and distribution lossess for providing electricity to source j in year y $TDL_{j,y}$	<table border="1"> <tr><td>Monitoring Checklist</td><td>Yes / No / NA</td></tr> </table>	Monitoring Checklist	Yes / No / NA	/01/ /02/	CAR-11	OK																
Monitoring Checklist	Yes / No / NA																					

	Title and description in line with methodology?	Yes							
	Data unit correctly stated?	Yes							
	Source clearly referenced?	Yes							
	Correct value provided for estimation?	N/A							
	Has this value been verified?	N/A							
	Measurement method and procedure correctly described?	N/A							
	Purpose of data correctly described	Yes							
	Additional comments (if any)	No							
B.7. Application of the monitoring methodology and description of the monitoring plan									
B.7.1. Data and parameters to be monitored by each CPA									
B.7.1.1. Has the PoA-DD contains monitoring parameters for the CPAs? Are the means of monitoring of all parameters contained in the monitoring plan feasible and in accordance with the requirements of the applied methodology?	No, in this section all monitoring parameters have not yet been included as per the requirements of the methodology. CAR 14 was raised.		/01/ /02/ /B02/	CAR 14	OK				
B.7.1.2. Is the list of parameters presented in section I.7.1 (Part II of PoA-DD) considered to be complete with regards to the requirements of the applied methodology? <i>P.S.: Provide assessment for each of the ex-post parameters below using separate rows.</i>	Refer to section B.7.1.1.		/01/ /02/ /B02/	OK	OK				
Parameter: P _y Population who consumes the purified water serviced by the project activity in year y	<table border="1"> <tr> <td>Monitoring Checklist</td> <td>Yes / No / NA</td> </tr> <tr> <td>Title and description in line</td> <td>Yes</td> </tr> </table>		Monitoring Checklist	Yes / No / NA	Title and description in line	Yes	/01/ /02/	OK	OK
Monitoring Checklist	Yes / No / NA								
Title and description in line	Yes								

	with methodology?				
	Data unit correctly stated?	Yes			
	Source clearly referenced?	Yes			
	Correct value provided for estimation?	N/A			
	Has this value been verified?	N/A			
	Measurement method and procedure correctly described?	Yes			
	Purpose of data correctly described	Yes			
	Additional comments (if any)	Yes			
Parameter: QPW _y Quantity of purified water in year y			/01/ /02/	OK	OK
	Monitoring Checklist	Yes / No / NA			
	Title and description in line with methodology?	Yes			
	Data unit correctly stated?	Yes			
	Source clearly referenced?	Yes			
	Correct value provided for estimation?	N/A			
	Has this value been verified?	N/A			
	Measurement method and procedure correctly described?	Yes			

	<table border="1"> <tr> <td>Purpose of data correctly described</td><td>Yes</td></tr> <tr> <td>Additional comments (if any)</td><td>No</td></tr> </table>	Purpose of data correctly described	Yes	Additional comments (if any)	No																	
Purpose of data correctly described	Yes																					
Additional comments (if any)	No																					
Parameter: m “fraction of functional appliances that are providing the SDW”.	<table border="1"> <tr> <td>Monitoring Checklist</td><td>Yes / No / NA</td></tr> <tr> <td>Title and description in line with methodology?</td><td>Yes</td></tr> <tr> <td>Data unit correctly stated?</td><td>Yes</td></tr> <tr> <td>Source clearly referenced?</td><td>Yes</td></tr> <tr> <td>Correct value provided for estimation?</td><td>N/A</td></tr> <tr> <td>Has this value been verified?</td><td>N/A</td></tr> <tr> <td>Measurement method and procedure correctly described?</td><td>Yes</td></tr> <tr> <td>Purpose of data correctly described</td><td>Yes</td></tr> <tr> <td>Additional comments (if any)</td><td>No</td></tr> </table>	Monitoring Checklist	Yes / No / NA	Title and description in line with methodology?	Yes	Data unit correctly stated?	Yes	Source clearly referenced?	Yes	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method and procedure correctly described?	Yes	Purpose of data correctly described	Yes	Additional comments (if any)	No	/01/ /02/	OK	OK
Monitoring Checklist	Yes / No / NA																					
Title and description in line with methodology?	Yes																					
Data unit correctly stated?	Yes																					
Source clearly referenced?	Yes																					
Correct value provided for estimation?	N/A																					
Has this value been verified?	N/A																					
Measurement method and procedure correctly described?	Yes																					
Purpose of data correctly described	Yes																					
Additional comments (if any)	No																					
Parameter: check for SDW public distribution network	<table border="1"> <tr> <td>Monitoring Checklist</td><td>Yes / No / NA</td></tr> <tr> <td>Title and description in line with methodology?</td><td>Yes</td></tr> <tr> <td>Data unit correctly stated?</td><td>Yes</td></tr> <tr> <td>Source clearly</td><td>Yes</td></tr> </table>	Monitoring Checklist	Yes / No / NA	Title and description in line with methodology?	Yes	Data unit correctly stated?	Yes	Source clearly	Yes	/01/ /02/	CAR 14	OK										
Monitoring Checklist	Yes / No / NA																					
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	<table border="1"> <tr> <td>referenced?</td> <td></td> </tr> <tr> <td>Correct value provided for estimation?</td> <td>N/A</td> </tr> <tr> <td>Has this value been verified?</td> <td>N/A</td> </tr> <tr> <td>Measurement method and procedure correctly described?</td> <td>Yes</td> </tr> <tr> <td>Purpose of data correctly described</td> <td>Yes</td> </tr> <tr> <td>Additional comments (if any)</td> <td>Yes</td> </tr> </table>	referenced?		Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method and procedure correctly described?	Yes	Purpose of data correctly described	Yes	Additional comments (if any)	Yes									
referenced?																						
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Has this value been verified?	N/A																					
Measurement method and procedure correctly described?	Yes																					
Purpose of data correctly described	Yes																					
Additional comments (if any)	Yes																					
Parameter: Quality of safe drinking water	<table border="1"> <tr> <td>Monitoring Checklist</td> <td>Yes / No / NA</td> </tr> <tr> <td>Title and description in line with methodology?</td> <td>Yes</td> </tr> <tr> <td>Data unit correctly stated?</td> <td>N/A</td> </tr> <tr> <td>Source clearly referenced?</td> <td>Yes</td> </tr> <tr> <td>Correct value provided for estimation?</td> <td>N/A</td> </tr> <tr> <td>Has this value been verified?</td> <td>N/A</td> </tr> <tr> <td>Measurement method and procedure correctly described?</td> <td>Yes</td> </tr> <tr> <td>Purpose of data correctly described</td> <td>Yes</td> </tr> <tr> <td>Additional comments (if any)</td> <td>Yes</td> </tr> </table>	Monitoring Checklist	Yes / No / NA	Title and description in line with methodology?	Yes	Data unit correctly stated?	N/A	Source clearly referenced?	Yes	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method and procedure correctly described?	Yes	Purpose of data correctly described	Yes	Additional comments (if any)	Yes	/01/ /02/	CAR 14	OK
Monitoring Checklist	Yes / No / NA																					
Title and description in line with methodology?	Yes																					
Data unit correctly stated?	N/A																					
Source clearly referenced?	Yes																					
Correct value provided for estimation?	N/A																					
Has this value been verified?	N/A																					
Measurement method and procedure correctly described?	Yes																					
Purpose of data correctly described	Yes																					
Additional comments (if any)	Yes																					

Parameter: EC _{pi,l,y} : Amount of electricity consumed in year y by project activities	Monitoring Checklist	Yes / No / NA	/01/ /02/	OK	OK
	Title and description in line with methodology?	Yes			
	Data unit correctly stated?	Yes			
	Source clearly referenced?	Yes			
	Correct value provided for estimation?	N/A			
	Has this value been verified?	N/A			
	Measurement method and procedure correctly described?	Yes			
	Purpose of data correctly described	Yes			
	Additional comments (if any)	No			
B.7.2. Description of the monitoring plan for a CPA:					
B.7.2.1 Has PoA-DD contains monitoring plan for a CPA in accordance with the approved monitoring methodology, and identified the monitoring provisions and data parameters a CPA has to apply/monitor?	Yes, the monitoring plan for a CPA contained in the PoA-DD is in accordance with the approved monitoring methodologies. The monitoring provisions and data parameters a CPA has to apply/monitor have been correctly identified.	/01/ /02/ /B02/, /B01-b/	OK	OK	
B.7.2.2. Are the QA/QC procedures described under monitoring appropriate sufficient to ensure the emission reductions achieved from the project activity can be reported ex-post and verified?	No, the QA/QC procedures are not yet described under monitoring plan. CAR 14 was raised.	/01/ /02/ /B02/	CAR 14	OK	
B.7.2.3. Have all means of implementing the monitoring plan, e.g. equations necessary for ex-post emission reduction calculation, been described clearly and in line with the methodology?	No, all means of implementing the monitoring plan, e.g. equations necessary for ex-post emission	/01/ /02/ /B02/	CAR 10	OK	

	reduction calculation have not yet been described clearly.			
	CAR 10 was raised.			
B.8 Consistency check and font size				
B.8.1 Does the following key terms and their description is consistent within the various section of the PoA-DD?		/01/ /02/	OK	OK
<i>P.S.: Additional rows may be added if required.</i>				
B.8.1.1. CME and Participants of PoA	Yes	/01/ /02/	OK	OK
B.8.1.2. Description/ Technology or measures to be employed by the CPA	Yes	/01/ /02/	OK	OK
B.8.1.3. Target group (end users type)	Yes	/01/ /02/	OK	OK
B.8.1.4. Eligibility criteria for inclusion of a CPA	Yes	/01/ /02/	OK	OK
B.8.2. Is the font size in all the respective documents is as per the requirements of Instructions for filling out the programme design document form for small-scale/large scale CDM programmes of activities?	Yes	/01/ /02/	OK	OK

Appendix 6. Assessment of sampling

Sl. No.	Checklist Questions	Assessment
1.	Does the PoA/PA opt for sampling for determination of any ex-ante parameters?	N/A The PoA does not opt sampling for determination of any ex-ante fixed parameters at the PoA level.
2.	Was the sample chosen by PP for determination of ex-ante parameters representative? P.S.: The justification on representativeness shall address at the minimum the	N/A

	following: (a) Religious diversity (b) Ethnic diversity (c) Gender diversity (d) Economic diversity (e) Regional diversity (f) Seasonal fluctuations/variations (g) Diverse age-groups							
3.	Has VT applied acceptance sampling approach to validate that sampling/survey efforts undertaken by PP to determine the ex-ante parameters were determined correctly? If yes, please provide a detailed justification of the approach adopted including information on (but not limited to): (a) Selected AQL Level (b) Selected UQL Level (c) Selected Consumer Risk Level (d) Selected Producer Risk Level (e) Sample Size chosen for acceptance sampling (f) Acceptance number (c) (g) Approach adopted by VT to in case value of greater than c discrepant records were observed in the sample	N/A						
4.	Does the PoA-DD/PDD opt for sampling approach for monitoring of ex-post parameters?	Yes. The CME has proposed to monitor 3 parameter annually or biennially through sampling survey including <table border="1" data-bbox="1341 863 2011 1123"> <tr> <td>Py</td><td>Population who consumes the purified water serviced by the project activity in year y</td></tr> <tr> <td>m</td><td>Fraction of functional appliances that are meeting the SDW Standard</td></tr> <tr> <td>Quality of safe drinking water</td><td>-</td></tr> </table>	Py	Population who consumes the purified water serviced by the project activity in year y	m	Fraction of functional appliances that are meeting the SDW Standard	Quality of safe drinking water	-
Py	Population who consumes the purified water serviced by the project activity in year y							
m	Fraction of functional appliances that are meeting the SDW Standard							
Quality of safe drinking water	-							
5.	Does the PoA-DD/PDD provide a sampling plan for determination of ex-post parameters?	Yes. It has been clearly documented a sampling plan for determination of ex-post parameters in section I.7.2 of the PoA-DD /02/.						
6.	Sampling Design:							
6.1.	Does the PoA-DD/PDD clearly define the objective of the proposed sampling plan? P.S.: Identification of parameter of interest	Yes. The proposed sampling plan has clearly defined the objective of the proposed sampling plan is to be to comply with the monitoring requirements set forth in the methodology AMS-III.AV (Version 07.0)/B02/.						

6.2	<p>Does the PoA-DD/PDD clearly define the reliability requirement (confidence and precision levels) to be achieved through the sampling effort and for the type of sampling effort (single CPA or across CPA sampling)?</p> <p>P.S.: reliability requirements shall be in accordance with the requirements of applied methodologies or Guideline: Sampling and surveys for CDM project activities and programmes of activities (Version 04.0) or Sampling and surveys for CDM project activities and programmes of activities (Version 07.0).</p>	<p>Yes. The PoA-DD clearly defined the reliability requirement (confidence and precision levels) to be achieved through the sampling effort as:</p> <ul style="list-style-type: none"> Confidence/precision levels of 95/10 is applied whenever sampling across a group of CPAs, which will typically be the case for this PoA. In the case of conducting CPA-specific sampling, confidence/precision level of 90/10 is applied if annual sampling and 95/10 is applied if biennial (every two years) <p>This is complied with the requirement of the methodology AMS-III.AV (Version07.0) and Standard: Sampling and surveys for CDM project activities and programmes of activities (Version 07.0) /B02/</p>
6.3	<p>Does the sampling plan clearly define the target population and describes any particular features associated with it?</p>	<p>Yes, the sampling plan has clearly defined that the target population is the total population which will be served under specific CPA or groups of CPA.</p>
6.4	<p>Does the sampling plan clearly select and describe sampling method to be applied?</p> <ol style="list-style-type: none"> Simple Random Sampling Stratified random Sampling Cluster Sampling Systematic Sampling Multi-stage Sampling 	<p>Yes, CME has clearly selected and described sampling method to be applied as simple random sampling.</p>
6.4.1.	<p>Does the method agree with the description of the population? Are there clusters or strata, and if so, does it state what they are?</p>	<p>Yes, the population is homogeneous. Therefore, the simple random sampling is suited. No clusters or strata are applicable to the population.</p>
6.5	<p>Is the selected sampling method appropriate for the project type, sampling objective and target population?</p>	<p>Yes, this PoA has only one project type, and the target population is homogeneous. Therefore the selected sampling method of simple random sampling is appropriate for the sampling objective.</p>
6.6	<p>Has correct formula been applied for calculation of sample size?</p> <p>P.S.: Sample size calculation shall be in accordance with the type of sampling method and Guideline: Sampling and surveys for CDM project activities and programmes of activities (Version 04.0)</p>	<p>Yes. The formular has been applied for calculation of sample size correctly.</p> <p><u>Sample size is determined for Proportional Values under simple random sampling using:</u></p> $n \geq \frac{1.96^2 N \times p(1 - p)}{(N - 1) \times 0.1^2 \times p^2 + 1.96^2 p(1 - p)}$ <p>Where:</p>

		<p> n : Sample size N=N_y : Population who consumes the purified water serviced by the project activity in year y p : Our expected proportion of the installed water purification systems will be in use and operating at the specified efficiency) 1.96 : Represents the 95% confidence required (1.645 represents the 90% confidence interval) 0.1 : Represents the 10 % relative precision </p> <p><u>Sample size is determined for a Mean Value under simple random sampling using:</u></p> $n \geq \frac{1.96^2 NV}{(N-1) \times 0.1^2 + 1.96^2 V} \quad V = \left(\frac{SD}{mean} \right)^2$ <p>Where:</p> <p> n : Sample size N=N_y : Number of SDWCs in the target population 1.96 : Represents the 95% confidence interval (1.645 represent the 90% confidence interval) 0.1 : Represents the 10% relative precision Mean : Our expected mean SD : Our expected standard deviation </p> <p>Those sample size calculation formulaes are in accordance with the simple random sampling method and Guideline: Sampling and surveys for CDM project activities and programmes of activities (Version 04.0).</p>
6.6.1	Is the proposed sample size adequate to achieve the minimum confidence/precision requirements?	Yes, the sample size calculation formulaes is adequate to achieve the minimum confidence/precision requirements.
6.6.2	Is the ex-ante estimate of the population variance needed for the calculation of the sample size adequately justified?	This will be determined at the CPA level
6.6.3	Is the target value for the population parameter reasonably anticipated?	This will be determined at the CPA level
6.6.4	Does the estimate of variability seem reasonable?	This will be determined at the CPA level
6.7	Does the sampling plan provide clear description of the sampling frame to be used?	Yes, the sampling plan has provided clear description of the sampling frame to be used.
	P.S.: This shall agree with the information about the target population and	

	sampling design.	
6.7.1	Does the Plan indicate that the sampling frame will be kept (e.g. in hard copy or a computer file of screen shot copy), and that random numbers will be generated, and these random numbers will then be used to select the sample?	Yes, Plan has indicated that the sampling frame will be kept in a computer. Samples will be selected for the respective appliance type. Random numbers will be generated and saved in a computer file and these will then be used to select the samples from the project database.
6.7.2	Does the sampling frame contain the information necessary to implement the sampling approach?	Yes, the sampling frame will be all the information in the database. It contain all necessary information to implement the sampling approach.
7	Data Collection	
7.1	Is the data collection/measurement method likely to provide reliable data given the nature of the parameters of interest and project, or is it subject to measurement errors?	Yes, based on technical knowledge of validation team, desk review and interview with relevant people during onsite visit, we confirmed that the data collection/measurement method likely provide reliable data given the nature of the parameters of interest and project.
7.1.1	Are the methods of data collection clear and unambiguous? P.S.: Some questions like “How much money do you spend on heating?”) can be subject to respondent error due to sensitivity or lack of recall viz., “How many times did you buy fuel last year?”), etc.,	Yes, the methods of data collection clear and unambiguous.No such questions could lead to respondent error due to sensitivity and lack of recall is used for data collection.
7.1.1.2	Are there questions that could be subject to measurement error? P.S.: For example, is a particular measurement method known to under-record key data, such as the weight of bricks?	The validation team has reviewed the list of questions to be used for data survey and collection and confirmed that there is no such question.
8	QA/QC Procedure:	
8.1	Are the procedures for the data measurements well defined and do they adequately provide for minimizing non-sampling errors?	Yes, the procedure for data measurements and well defined. Adequate measure is taken to avoid low rate response and answer bias and eliminated outliers during the analysis. The validation team found that those measures plausible and ensure minimizing non-sampling errors.
8.1.1	Is the quality control and assurance strategy adequate?	Yes, the quality control and assurance strategy deem plausible.
8.1.2	Are there mechanisms for avoiding bias in the answer? P.S.: Mechanisms for avoiding non-sampling errors (bias) include good questionnaire design, well-tested questionnaires, possibly pilot testing the data collection.	Yes, CME has described the mechanisms for avoiding bias including good questionnaire design, well-tested questionnaires and possibly pilot testing the data collection.
8.2	Are the proposed skill sets, qualifications and experience of the personnel to be engaged to conduct sampling adequate?	Validation team based on on site inspection interview confirms that the CME has skills, qualifications or experience of the personnel to be engaged to conduct sampling and survey.
9.	Assessment of survey and data collection methods proposed for the PoA/PA	

9.1	<p>Please specify which survey method has been used by PP?</p> <ul style="list-style-type: none"> a) Hard-copy questionnaires b) smartphone or tablet app modules c) Data Sensor d) Telephone Interview e) E-mail or web-based platform or SMS f) Mailing (post) (questionnaires sent by regular mail) 	<p>Survey method has been used by PP, which includes:</p> <ul style="list-style-type: none"> a) Face to face interview b) Telephone interview c) Hard-copy questionnaires
9.1.1	Is the selected method compliant with the requirements of the CDM methodology?	Yes, this selected method complies with the requirement of CDM methodology.
9.2	<p>Does the proposed data collection method match the available sampling frame?</p> <p>P.S.: A sampling frame is a complete listing of all individual units (elements, members) that can be considered as a representation of the whole population, and which can be used as a basis for selecting a sample.</p>	Yes, this method matches the available sampling frame.
9.2.1	What measures are in place to ensure that non-participating households are excluded from survey and data collection methods that do not rely on physical on-site visits?	All the households participating in the program will be assigned an unique ID number which will be updated in the database. Everytime they take the water they need to sign in the log books. This log book is kept and reviewed and updated by the CME. This ensure that non-participating households are excluded from survey and data collection.
9.2.2	<p>What mechanisms are in place to ensure that the intended recipient of the survey is the same person who completes the questionnaire?</p> <p>P.S.: This is relevant to all survey and data collection methods;</p>	The CME will conduct face-to-face interview or telephone interview. This will ensure the intended recipient of the survey is the same person who completes the questionnaire.
9.3	Is the proposed survey and data collection method approach clear and suitable?	Yes, it is clear and suitable.
9.3.1	<p>Is there a mechanism for ensuring that the data collected are of high quality? Have these mechanisms been tested in pilot telephone interviews?</p> <p>P.S.: For example, during a telephone interview, the interviewer relies on the respondent giving an accurate answer to the question that is being asked.</p>	Yes, all sampling efforts will be conducted by qualified personnel who have undergone training as part of the programme. They has been trained to do the interview and make sure that the data collected are of high quality.
9.3.2	<p>Does the chosen data collection method suit the capability of the intended recipients?</p> <p>P.S.: For example, a mail-based questionnaire method would be unsuitable for a target population with a low literacy rate;</p>	Yes, the chosen data collection method is face to face interview and telephone interview using the hardcopy questionnaire. This method is suit the capacity of the intended recipients.
9.4	Is the stated anticipated response rate reasonable for the selected survey and data collection method?	This will be checked on the survey conducted at the specific CPA level
	Is the planning information described above contained in the data collection plan?	This will be checked on the survey conducted at the specific CPA level

	P.S.: This is essential, as some methods afford weak control over the achievable response rate	
9.4.1	Is the anticipated response rate too low to match the number of required valid returns?	This will be checked on the survey conducted at the specific CPA level
9.5	Is the selected survey and data collection method likely to yield results that are representative of the entire target population? P.S.: Some survey and data collection methods (e.g. web-based surveys) are known to suffer from respondent self-selection, so yielding results that are not representative of the entire population.	Yes, the selected survey and data collection method is deemed plausible and likely to yield results that are representative of the entire target population.
9.5.1	Is a mechanism for redressing the bias proposed? If so, is it clearly explained and supported by existing endorsed methods?	Yes, CME has described the mechanisms for avoiding bias including good questionnaire design, well-tested questionnaires and possibly pilot testing the data collection.
9.5.2	Does the data collection plan indicate that the existing sampling frame is fit for the intended purpose?	Yes, existing sampling frame is fit for intended purpose
9.5.3	What mechanisms are in place to maximize the accuracy of the sampling frame? P.S.: For example, a sampling frame with telephone numbers of many digits is prone to recording errors, thus excluding eligible households whose telephone number is incorrect.	All the data from household will be inputted into the database by the Women Union of that area. CME team will check again the original hardcopy and the information input in the database. This mechanism ensure maximize the accuracy of sampling frame.
9.6	Is the survey and data collection method likely to provide reliable data given the nature of the parameters of interest or is it subject to measurement errors by its very nature?	Yes, based on technical knowledge of validation team, desk review and interview with relevant people during onsite visit, we confirmed that the data collection/measurement method will likely provide reliable data given the nature of the parameters of interest and project.
9.6.1	Are there questions whose answer could be subject to respondent error due to the delivery mechanism of the data collection method itself? P.S. For example, the answer “forty” units as opposed to “fourteen” units, in a telephone interview when the respondent is asked to read a meter.	No, the questionnaire is using yes/no questions to check the status, nature of the parameters, etc. There is unlikely to have respondent error due to the delivery mechanism of data collection method.
9.6.2	Is a mechanism for mitigating the effect of under-coverage proposed? If so, is it clearly explained and supported by existing endorsed methods? P.S.: Some data collection methods are known to suffer from under-coverage, which occurs when sections of the target population do not appear in the sampling frame. For example, do all eligible households have reliable access to the Internet?	Mechanism for data collection is face to face and phone interview using hardcopy questionnaires. By this CME can access to all the households. There is unlikely any effect of under-coverage.
9.7	Are the procedures for the selected survey and data collection method unambiguously defined and do they adequately provide for minimizing non-	Yes, all the procedures for selected survey and data collection method has been clearly defined and adequately provide for minimizing

	sampling errors?	non-sampling errors.
9.7.1	Is the quality control and assurance strategy adequate?	Yes, the validation team has reviewed and found the quality control and assurance strategy to be adequate
9.7.2	Have potential sources of bias inherent in the selected data collection method, such as self-selection and under-coverage, been anticipated? Have mechanisms for mitigating these been considered?	Yes, potential sources of bias inherent in selected data collection method has been eliminated by using random number generated by computer for sample selection.
9.8	Does the proposed data collection plan contain the information necessary to implement the selected survey and data collection method?	Yes, proposed data collection plan contain the information necessary to implement the selected survey and data collection method
9.8.1	Are the proposed skill sets, qualifications and experience of the personnel/institutions engaged to conduct the standardized tests/data collection exercise adequate?	Yes, the institution conduct the standardized test for water quality is an independent accredited laboratory in Viet Nam.
9.9	Does the PP have a process in place to ensure data quality is maintained to a high standard? This should include: <ul style="list-style-type: none"> a) Are the personnel trained and experienced? b) What is the level of supervision and guidance provided to staff? c) Is there a standardized system for data entry and analysis to produce final result? d) Is there a system or process in place to minimize the introduction of errors? e) Is there a system in place to ensure all collected data is processed; f) Are quality checks performed on data entered, for example range checks, g) inconsistency checks, checking of subsamples of data by supervisors; h) is there a system to check for errors, record and report errors reported and document the remedial action taken; i) What is the level of security and type of backup processes to guarantee data integrity, for example methods to prevent fraud and accidental deletion. 	Yes, CME have a process in place to ensure data quality is maintain to high standard.

Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
03.0	31 May 2019	Revision to: <ul style="list-style-type: none">• Ensure consistency with version 02.0 of the “CDM validation and verification standard for programmes of activities” (CDM-EB93-A08-STAN);• Make 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	4 May 2015	Initial publication.
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