

Validation report form for post-registration changes for CDM programme of activities

| CDM | programme of activities |
|--|---|
| | (Version 02.0) |
| Complete this form in accordance with the instruc | tions attached at the end of this form. |
| BASIC | INFORMATION |
| Title and UNFCCC reference number of the programme of activities (PoA) | PoA for the Reduction of emission from non-renewable fuel from cooking at household level |
| | UNFCCC PoA Reference Number: 7359 |
| Process track | ☑ Prior approval |
| | ☐ Issuance |
| | ☐ Renewal of PoA |
| Version number of the validation report on PoA PRCs | 01 |
| Completion date of the validation report on PoA PRCs | 16/01/2018 |
| Version number of PoA-DD applicable to this validation report | Version: 17; Dated: 15/01/2018 |
| Type(s) of PoA PRCs | Temporary deviations from the registered monitoring plan, applied methodologies or applied standardized baselines |
| | □ Corrections |
| | ☐ Inclusion of monitoring plan |
| | Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from applied methodologies, standardized baselines, or other applied standards or tools |
| | ☐ Changes to the programme design |
| | Changes specific to afforestation and reforestation activities |
| Coordinating/managing entity | Green Development AS |
| Host Parties | Ethiopia |
| | Kenya |
| | Madagascar |
| | Malawi |
| | Mozambique |
| | Nigeria |
| | Uganda |
| | Zambia |
| | Chad Dominia Bonublia |
| | Dominic Republic |

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Ivory Coast

CDM-PoA-PRCV-FORM

| | Liberia |
|---|---|
| | Namibia |
| | Rwanda |
| | Sierra Leone |
| | Somalia |
| | Ghana |
| | South Africa |
| | Zimbabwe |
| Applied methodologies and standardized baselines | AMS-I.E. "Switch from non-renewable biomass for thermal application by the end user" (version 04) |
| Mandatory sectoral scopes linked to the applied methodologies | Sectoral scope 1: Energy Industries (renewable - /non renewable sources) |
| Conditional sectoral scopes linked to the applied methodologies, if applicable | N/A |
| 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 on PoA PRCs | VIkash Kumar Singh, Executive Director |

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SECTION A. Executive summary

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The Project Participant has appointed Carbon Check (India) Private Ltd., (CCIPL) to perform the validation of the Post Registration Changes to the CDM Programme of Activities (PoA) "PoA for the Reduction of emission from non-renewable fuel from cooking at household level" (hereafter "PoA").

The term "UNFCCC criteria" refers to Article 12 of the Kyoto Protocol, the CDM modalities and procedures and the subsequent decisions by the CDM Executive Board. The independent Validation by the DOE is required on the Registered PoA-DD (part I and part II) of the PoA to confirm the post registration changes. This report summarises the post registration changes of the project with respect to VVS for PoA requirements (version 01.0). This report contains the findings and resolutions from the validation and a validation opinion.

The objective of the PoA is replacement of non-renewable biomass with renewable fuel for cooking and water purification in participating households. The technologies included in the programme are ethanol, biogas stoves and water purification systems.

Scope:

The scope of the PRC validation is defined as an independent and objective review of the revised PoA-DD and to verify the impact of proposed revision of the PoA-DD.

Validation methodology and process

The validation has been performed as described in the VVS for PoA (version 01.0) and constitutes the following steps:

- Review of the Registered PoA-DD (version 13; Dated: 14/12/2013) /B02/
- Desk review of relevant documents
- Interview with representatives of the CME

The summary of proposed changes is as below;

| | Corrections |
|---------|---|
| SI. No. | Corrections in PoA-DD & Generic CPA-DD |
| 1. | Minor spelling and removing of space between words and paragraphs. |
| 2. | Change of fonts used in the document where different fonts were initially used. |
| 3. | Using the latest format of the CDM-POA-DD-FORM (Version 08.1) which is used for this document) |
| 4. | Correction to the document version number and the date of the completion of the CDM PoA-DD. |
| 5. | Moved the summary of the PRC that was done in version 13 of this document from the main test, to this appendix. |
| 6. | Addition of conditions with regards to availability of credit facility to Local Project Implementation Partners (LPIP). |
| 7. | Removal of text with regards to ethanol stoves being the highest generator of CERs among the technological solutions to be implemented under this PoA. |
| 8. | Addition of texts with regards to the use of funds from sale of CERs that the funding from sales of CERs to pay for required support and maintenance for the systems deployed under this PoA. |
| 9. | Update of the contact information provided in Appendix 1 of CME. |
| 10. | Elaborating on the definition of water purification system to further clarify that water supply systems can be considered as water purification system in regard to this PoA, as long as that water meets the quality requirement as specified in the Eligibility Criteria. |
| 11. | A typographical error in eligibility criterion 3 has been corrected by removing the reference to non-renewable energy sources. |

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| Addition of text to indicate that denatured alcohol might also be source | • |
|--|------------------|
| factories and other entities, that make ethanol as a by-product from their | main business, |
| in addition to purchase from micro distilleries. | |
| Addition of text to indicate that dried bagasse might be used as energy | source for the |
| boiler for the distillation process in place of dried sugarcane. | |
| Permanent changes to monitoring Plan | |
| SI. No. Generic CPA-DD | |
| 1. Revision in monitoring frequency of the ex-post parameters from Annual to | |
| Addition of text to indicate scanned (soft) copies of baseline survey for provided to CME rather than sending the original survey forms by regular provided to CME rather than sending the original survey forms by regular provided to CME rather than sending the original survey forms by regular provided to CME rather than sending the original survey forms by regular provided to CME rather than sending the original survey forms by regular provided to CME rather than sending the original survey forms by regular provided to CME rather than sending the original survey forms by regular provided to CME rather than sending the original survey forms by regular provided to CME rather than sending the original survey forms by regular provided to CME rather than sending the original survey forms by regular provided to CME rather than sending the original survey forms by regular provided to CME rather than sending the original survey forms by regular provided to CME rather than sending the original survey forms by regular provided to CME rather than sending the original survey forms by regular provided to CME rather than sending the original survey forms by regular provided to CME rather than sending the original survey forms by regular provided the original survey forms by the original survey for the origina | 9 |
| Addition of provision to account for failure to reach required confidence/pr the time of verification in accordance with latest version of CDM rules a available at the time of verification. | |
| Addition of text to indicate that random selection of households to be moni done with the use of random selection in excel, from all project participati in the CPA or batch of CPA included in the program at the time of selection to be monitored. | ing households |
| Addition of text to clarify that water test to confirm that drinking water sprogram meet the required WHO's interim performance targets on hout treatment, can additionally be done by a certified laboratory on-site during process. | useholds water |
| 6. Addition of text to clarify that during 7 days of monitoring period halternatively be provided with 12 litres of denatured alcohol in place of 20 l | |
| 7. Deletion of text with reference to number (20) and volume (10 litre) of containers for monitoring purpose to households that use purified water. | of empty water |
| 8. Change in personnel responsible for calculation of emission reductions fo Recording and Data Manager to CME. | r the CPA from |
| 9. Addition of a row to provide for the name of a person from the household monitored in the Monitoring Form. | that has been |
| Change in measurement methods and procedures for parameter QDWp,y | to indicate that |
| monitoring of random sample of project participating household will be don | |
| the monitoring process as described in the Monitoring Plan in place | • |
| management manual. | Ũ |
| Inclusion of text to indicate that 95/5 confidence level shall be applied in c | case of biennial |
| monitoring. | |

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SECTION B. Validation team, technical reviewer and approver

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B.1. Validation team member

| No. | Role | | Last name | First name | Affiliation | Ir | nvolve | ment i | n |
|-----|------------------------------|------------------|-----------|------------|--|-----------------|--------------------|------------|---------------------|
| | | Type of resource | | | (e.g. name of central or other office of DOE or outsourced entity) | Document review | On-site inspection | Interviews | Validation findings |
| 1. | Team Leader / Validator / | IR | Anand | Amit | CCIPL | Х | NA | Х | Х |
| 2. | Technical Expert | ЫR | Nesari | R. V. | CCIPL | Х | NA | | |

B.2. Technical reviewer and approver of the validation report on PoA PRCs

| No. | Role | Type of | Last name | First name | Affiliation |
|-----|--------------------|----------|-----------|--------------|--------------------|
| | | resource | | | (e.g. name of |
| | | | | | central or other |
| | | | | | office of DOE or |
| | | | | | outsourced entity) |
| 1. | Technical reviewer | IR | Agarwalla | Sanjay Kumar | CCIPL |
| 2. | Approver | IR | Singh | Vikash Kumar | CCIPL |

SECTION C. Means of validation

C.1. Document review

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The validation was performed primarily based on the review of the revised PoA-DD and the supporting documentation. This process included review of data and information presented to verify their completeness and review of the monitoring plan and monitoring methodology. Documents reviewed or referenced during the verification are listed in Appendix 3 below.

C.2. On-site inspection

No on-site visit was conducted.

C.3. Interviews

| No. | | Interviewee | | | Subject | Team member |
|-----|-----------|-------------|----------------------------|---|---|----------------------------|
| | Last name | First name | Affiliation | | | |
| 1. | Norstebo | Havard | Green Development AS | 12/01/2018; 15/01/2018; 16/01/2018 (Via Skype) | Discussion on the revised PoA- DD & CPA-DDs | Amit Anand, R.V. Nesari |
| | | | | | | |

C.4. Clarification requests, corrective action requests and forward action requests raised

| Areas of validation findings | No. of CL | No. of CAR | No. of FAR |
|---|-----------|------------|------------|
| Compliance with PoA-DD form | | 01 | |
| Temporary deviations from the registered monitoring | | | |

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| plan, applied methodologies or applied standardized baselines | | | |
|---|----|----|--|
| Corrections | | 01 | |
| Inclusion of monitoring plan | 01 | | |
| Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from applied methodologies, standardized baselines, or other applied standards or tools | | | |
| Changes to the programme design | | | |
| Changes specific to afforestation and reforestation activities | | | |
| Others (please specify) | | | |
| Total | 01 | 02 | |

SECTION D. Validation findings

D.1. Compliance with the PoA-DD form

| Means of validation | DR |
|---------------------|---|
| Findings | CAR 01 has been raised in this regard. Please refer to Appendix 4 for detailed |
| _ | closure of validation finding. |
| Conclusion | Depends on the closure of CAR 01 |

D.2. Temporary deviations from the registered monitoring plan, applied methodologies or applied standardized baselines

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

D.3. Corrections

| Means of validation | DR, I |
|---------------------|---|
| Findings | CAR 02 has been raised in this regard. Please refer to Appendix 4 for detailed |
| | closure of validation finding. |
| Conclusion | Depends on the closure of CAR 02. |

D.4. Inclusion of monitoring plan

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

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D.5. Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from applied methodologies, standardized baselines, or other applied standards or tools

| Means of validation | DR, I | | | |
|---------------------|--|--|--|--|
| Findings | CL 01 has been raised in this regard. Please refer to Appendix 4 for detailed | | | |
| _ | closure of validation finding. | | | |
| Conclusion | Depends on the closure of CL 01 | | | |

D.6. Changes to the programme design

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

D.7. Changes specific to afforestation and reforestation activities

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

SECTION E. Internal quality control

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The final validation report passed a technical review and quality review before being submitted to the project participant 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

>>

Depends on the closure of validation findings.

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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 | | |
| CPA | Component Project Activity | | |
| CPA-DD | Component Project Activity Design Document | | |
| 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 | | |
| DNA | Designated National Authority | | |
| DOE | Designated Operational Entity | | |
| DR | Document Review | | |
| EB | Executive Board | | |
| ER | Emission Reduction | | |
| FAR | Forward Action Request | | |
| GHG | Greenhouse Gas | | |
| GWh | Giga Watt Hours | | |
| 1 | Interview | | |
| IPCC | Intergovernmental Panel on Climate Change | | |
| kW | Kilo Watt | | |
| kWh | Kilo Watt Hours | | |
| MoV | Means of Verification | | |
| MoC | Modalities of Communications | | |
| MW | Mega Watt | | |
| MWh | Mega Watt Hours | | |
| ODA | Official Development Assistance | | |
| OSV | On-Site Visit | | |
| PE | Project Emission | | |
| PoA | Programme of Activities | | |
| PoA-DD | Programme of Activities design document | | |
| PP | Project Participant | | |
| t | Tonne | | |
| UNFCCC | United Nations Framework Convention on Climate Change | | |
| VT | Validation team | | |
| VVS | Validation and Verification Standard | | |

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Appendix 2. Competence of team members and technical reviewers

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Appendix 3. Documents reviewed or referenced

| No. | Author | Title | References to the document | Provider |
|-------|--------|--|-----------------------------------|----------|
| /01/ | CME | Initial revised PoA-DD | Version 17; Dated: 15/01/2018 | CME |
| /02/ | CME | Final revised PoA-DD | Version: XX; Dated: DD/01/2018 | CME |
| /B01/ | UNFCCC | 1. CDM VVS for PoA (Version 01.0). 2. CDM PS for PoA (Version 01.0) 3. CDM PCP for PoA (Version 01.0) | http://cdm.unfccc.int/ | Others |
| /B02/ | UNFCCC | PoA-DD (version 13; Dated: 14/12/2013) and the corresponding validation report for the registered PoA "PoA for the reduction of emission from non-renewable fuel from cooking at household level" (UNFCCC Ref. No. 7359) | http://cdm.unfccc.int/ | Others |
| /B03/ | UNFCCC | AMS-I.E. "Switch from non- renewable biomass for thermal application by the end user" (version 04) | http://cdm.unfccc.int/ | Others |
| /B04/ | UNFCCC | Programme design document form for CDM programmes of activities (CDM-POA-DD-FORM), (Version 08.1) | http://cdm.unfccc.int/ | Others |
| /B05/ | UNFCCC | Glossary of CDM Terms, version 07.0 | http://cdm.unfccc.int/ | Others |

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

Table 1. CLs from this validation

| CL ID | 01 | Section no. | D.5 | Date: 16/01/2018 | |
|---|--|-------------|-----|------------------|--|
| Description | of CL | | | | |
| During review of revised PoA-DD (version 17), it has been observed that some of the changes to the monitoring plan have been listed as corrections in Appendix 6 of the revised PoA-DD. | | | | | |
| | Furthermore, it has also been observed that some of the explanations or clarifications made in the PoA-DD to better illustrate the accurate reflection of actual project or programme information have been listed as changes. | | | | |
| PP shall clari | PP shall clarify how corrections and changes to MP have been classified and listed in Appendix 6 of PoA- | | | | |
| CME's response | CME's response Date: DD/MM/YYYY | | | | |
| | | | | | |
| Documentation provided by CME | | | | | |
| | | | | | |
| DOE assessment Date: DD/MM/YYYY | | | | | |
| | | | | | |

Table 2. CARs from this validation

| TUDIC E. | Table 2: OAKS ITOM time validation | | | | | |
|---------------------------------|--|-------------|-----|------------------|--|--|
| CAR ID | 01 | Section no. | D.1 | Date: 16/01/2018 | | |
| Description | of CAR | | | | | |
| | The revised PoA-DD submitted for validation of PRC doesn't use the latest version of the PoA template available on UNFCCC website. | | | | | |
| CME's response | CME's response Date: DD/MM/YYYY | | | | | |
| | | | | | | |
| Documentat | Documentation provided by CME | | | | | |
| | | | | | | |
| DOE assessment Date: DD/MM/YYYY | | | | | | |
| | | | | | | |

| CAR ID | 02 | Section no. | D.3 | Date: 16/01/2018 | |
|--|---------------------------------|-------------|-----|------------------|--|
| Description | of CAR | | | | |
| The list of corrections and changes as presented in Appendix 6 of the revised PoA-DD (version 17) is not complete as it doesn't contain information on some of the corrections made in the part I and part II of the PoA-DD. | | | | | |
| CME's response Date: DD/MM/YYYY | | | | | |
| | | | | | |
| Documentation provided by CME | | | | | |
| | | | | | |
| DOE assess | DOE assessment Date: DD/MM/YYYY | | | | |
| | | | | | |

Table 3. FARs from this validation

| FAR ID | XX | Section no. | Date: DD/MM/YYYY | | |
|---------------------------------|-------------------------------|-------------|------------------|--|--|
| Description | of FAR | | | | |
| | | | | | |
| CME's resp | onse | | Date: DD/MM/YYYY | | |
| | • | | | | |
| Documenta | Documentation provided by CME | | | | |
| | | | | | |
| DOE assessment Date: DD/MM/YYYY | | | | | |
| | | | · | | |

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Appendix 5. Clarification requests, corrective action requests and forward action requests

Table 1: Corrections

| SI. No. | Corrections in PoA-DD & Generic CPA-DD | Assessment By DOE |
|---------|---|---|
| 1. | Minor spelling and removing of space between words and paragraphs. | Depends on the closure of validation findings |
| 2. | Change of fonts used in the document where different fonts were initially used. | Depends on the closure of validation findings |
| 3. | Using the latest format of the CDM-POA-DD-FORM (Version 08.1) which is used for this document) | Depends on the closure of validation findings |
| 4. | Correction to the document version number and the date of the completion of the CDM PoA-DD. | Depends on the closure of validation findings |
| 5. | Moved the summary of the PRC that was done in version 13 of this document from the main test, to this appendix. | Depends on the closure of validation findings |
| 6. | Addition of conditions with regards to availability of credit facility to Local Project Implementation Partners (LPIP). | Depends on the closure of validation findings |
| 7. | Removal of text with regards to ethanol stoves being the highest generator of CERs among the technological solutions to be implemented under this PoA. | Depends on the closure of validation findings |
| 8. | Addition of texts with regards to the use of funds from sale of CERs that the funding from sales of CERs to pay for required support and maintenance for the systems deployed under this PoA. | Depends on the closure of validation findings |
| 9. | Update of the contact information provided in Appendix 1 of CME. | Depends on the closure of validation findings |
| 10. | Elaborating on the definition of water purification system to further clarify that water supply systems can be considered as water purification system in regard to this PoA, as long as that water meets the quality requirement as specified in the Eligibility Criteria. | Depends on the closure of validation findings |
| 11. | A typographical error in eligibility criterion 3 has been corrected by removing the reference to non-renewable energy sources. | Depends on the closure of validation findings |
| 12. | Addition of text to indicate that denatured alcohol might also be sourced from sugar factories and other entities, that make ethanol as a by-product from their main business, in addition to purchase from micro distilleries. | Depends on the closure of validation findings |
| 13. | Addition of text to indicate that dried bagasse might be used as energy source for the boiler for the distillation process in place of dried sugarcane. | Depends on the closure of validation findings |

Table 2: Revision in Monitoring Plan

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CDM-PoA-PRCV-FORM

| SI. No. | Generic CPA-DD | Assessment by DOE |
|---------|--|---|
| 1. | Revision in monitoring frequency of the ex-post parameters from Annual to Biennial. | Depends on the closure of validation findings |
| 2. | Addition of text to indicate scanned (soft) copies of baseline survey forms might be provided to CME rather than sending the original survey forms by regular post. | Depends on the closure of validation findings |
| 3. | Addition of provision to account for failure to reach required confidence/precision level at the time of verification in accordance with latest version of CDM rules and regulations available at the time of verification. | Depends on the closure of validation findings |
| 4. | Addition of text to indicate that random selection of households to be monitored, could be done with the use of random selection in excel, from all project participating households in the CPA or batch of CPA included in the program at the time of selection of household to be monitored. | Depends on the closure of validation findings |
| 5. | Addition of text to clarify that water test to confirm that drinking water supplied by the program meet the required WHO's interim performance targets on households water treatment, can additionally be done by a certified laboratory onsite during the monitoring process. | Depends on the closure of validation findings |
| 6. | Addition of text to clarify that during 7 days of monitoring period household can alternatively be provided with 12 litres of denatured alcohol in place of 20 litres. | Depends on the closure of validation findings |
| 7. | Deletion of text with reference to number (20) and volume (10 litre) of empty water containers for monitoring purpose to households that use purified water. | Depends on the closure of validation findings |
| 8. | Change in personnel responsible for calculation of emission reductions for the CPA from Recording and Data Manager to CME. | Depends on the closure of validation findings |
| 9. | Addition of a row to provide for the name of a person from the household that has been monitored in the Monitoring Form. | Depends on the closure of validation findings |
| 10. | Change in measurement methods and procedures for parameter QDWp,y to indicate that monitoring of random sample of project participating household will be done according to the monitoring process as described in the Monitoring Plan in place of Program management manual. | Depends on the closure of validation findings |
| 11. | Inclusion of text to indicate that 95/5 confidence level shall be applied in case of biennial monitoring. | Depends on the closure of validation findings |

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Document information

| Version | Date | Description |
|---------|------------------|---|
| 02.0 | 29 December 2017 | Revision to align with the requirements of the "CDM validation and verification standard for programme of activities" (version 01.0). |
| 01.0 | 5 June 2015 | Initial publication. |

Decision Class: Regulatory Document Type: Form

Business Function: Registration Keywords: post-registration change, programme of activities, validation report

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