




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

(version 01.0)

Complete this form in accordance with the "Attachment: Instructions for filling out the validation report form for post-registration changes for CDM programme of activities" at the end of this form.

### VALIDATION REPORT ON POST-REGISTRATION CHANGES (PRCs)

<b>Title and reference number of the programme of activities (PoA)</b>	India Small Scale Solar PV Programme of Activities UNFCCC PoA Reference Number: 8426
<b>Process track</b>	<input checked="" type="checkbox"/> Prior approval <input type="checkbox"/> Issuance <input type="checkbox"/> Renewal of crediting period
<b>Version number of the validation report on PoA PRCs</b>	05
<b>Completion date of the validation report on PoA PRCs</b>	01/07/2017
<b>Version number of PoA-DD and/or CPA-DD applicable to this validation report</b>	PoA-DD; Version : 10.0 dated : 29/06/2017
<b>Type(s) of PoA PRCs</b>	<input type="checkbox"/> Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline <input checked="" type="checkbox"/> Corrections <input type="checkbox"/> Changes to the start date of the crediting period <input type="checkbox"/> Inclusion of a monitoring plan to a registered PoA <input checked="" type="checkbox"/> Permanent changes from registered monitoring plan, monitoring methodology or standardized baseline <input type="checkbox"/> Types of changes specific to afforestation and reforestation activities <input checked="" type="checkbox"/> Changes to the programme design of a registered PoA <input type="checkbox"/> Changes to project design of generic component project activities or specific-case component project activities
<b>Coordinating/managing entity (CME)</b>	Mabanaft Carbon India Private Limited
<b>Host Party(ies)</b>	India
<b>Sectoral scope(s)</b>	Sectoral scope 1: Energy Industries (renewable - /non renewable sources)
<b>Selected methodology(ies)</b>	AMS-I.D, Version 17.0 "Grid connected renewable electricity generation" AMS-I.F, Version 03.0, "Renewable electricity generation for captive use and mini-grid" ACM0002, Version 17.0 "Grid-connected electricity generation from renewable sources"
<b>Selected standardized baseline(s), where applicable</b>	N/A
<b>Name of DOE</b>	Carbon Check (India) Private Ltd.
<b>Name, position and signature of the approver of the validation report on PoA PRCs</b>	Vikash Kumar Singh, Compliance Officer 

## SECTION A. Executive summary

The Project Participant has commissioned Carbon Check (India) Private Ltd., (CC IPL) to perform the validation of the Post Registration Changes to the CDM Programme of Activities (PoA) "India Small Scale Solar PV Programme of Activities" in India, UNFCCC PoA Reference Number: 8426 (hereafter referred as "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 requirements (version 09). This report contains the findings and resolutions from the validation and a validation opinion.

The objective of the PoA and the CPA(s) is installation of renewable technology (solar or wind) in India and increase the supply of renewable energy into the country's electricity grid or for captive/third party sale. The electricity produced and supplied through this programme will replace the fossil fuel dominated electricity thus lowering greenhouse gas emissions.

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.

### Validation methodology and process

The validation has been performed as described in the VVS (version 09.0) and constitutes the following steps:

- Review of the Registered PoA-DD
- Desk review of relevant documents
- Interview with representatives of the CME

The summary of proposed changes is as below;

- Methodologies, AMS I.F (version 03.0) and ACM0002 (version 17.0) are added in PoA
- Renewable Technologies of wind are added along with solar technology
- All section of PoA-DD revised for the above mentioned changes
- Deletion of project emissions due to fossil fuel consumption in line with the applied methodologies AMS I.D, version 17.0
- Addition of apportioning method for deriving of the net electricity supplied to grid in the monitoring section
- There are few corrections as mentioned in section D.3 below.

The description in the revised PoA-DD, Version 10.0 dated 29/06/2017 /01-6/ meets all relevant UNFCCC requirements for the CDM PoA-DD and correctly applies the selected baseline and monitoring methodologies /B03/. This report is the combined assessment opinion for all the changes that are proposed in the PoA-DD and being submitted for prior approval to CDM EB.

The version of the templates for PoA-DD was updated to the latest version of template. This change was assessed, to confirm the compliance of filling guideline and CC IPL confirms that the revised PoA-DD, as provided by the CME, comply with the filling instructions of the PoA-DD. Furthermore, CC IPL through review of revised PoA-DD /01-6/, confirms that the information included in the new form(s) is materially the same as the information in the registered PoA-DD.

The Validation team confirms the contractual relationship signed on 29/10/2016 in between the DOE, Carbon Check (India) Private Ltd., and the Project Participant, Carbonbay GmbH & Co., KG. The team assigned to the validation meets the Carbon Check (India) Private Ltd's 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 Carbon Check's procedures and requirements.

The report is based on the assessment of the revised project design document undertaken through application of standard auditing techniques including but not limited to document reviews and stakeholder interviews, review of the applicable/applied methodology and its underlying formulae and calculations.

This report contains the findings and resolutions from the validation and a validation opinion on the proposed post-registration changes thus confirming the revised project design as document is sound and reasonable and meets the stated requirements and identified criteria.

## **SECTION B. Validation team, technical reviewer and approver**

### **B.1. Validation team member**

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk review	On-site inspection	Interview(s)	Validation findings
1.	Team Leader / Validator / Technical Expert	IR	Agarwalla	Sanjay Kumar	CC IPL	X	NA	X	X

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

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	Anand	Amit	CC IPL
2.	Approver	IR	Singh	Vikash Kumar	CC IPL

## **SECTION C. Means of validation**

### **C.1. Desk review**

The validation was performed primarily based on the review of the revised PoA-DD /01-6/ 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			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Patil	Ramkrishna	EKI Energy Services Ltd	09/02/2017 03/04/2017	Discussion on the revised PoA-DD	Sanjay Kumar Agarwalla

### **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 and/or CPA-DD form(s)	01	--	--
Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline	--	--	--
Corrections	03	--	--

Changes to the start date of the crediting period	--	--	--
Inclusion of a monitoring plan in a registered PoA	--	--	--
Permanent changes from registered monitoring plan, monitoring methodology or standardized baseline	--	--	--
Types of changes specific to afforestation and reforestation project activities	--	--	--
Changes to the programme design of a registered PoA	04	--	--
Changes to project design of generic component project activities or specific-case component project activities	--	--	--
Others (please specify) – Against UNFCCC Completeness check query	--	01	--
<b>Total</b>	<b>08</b>	<b>01</b>	<b>--</b>

## SECTION D. Validation findings

### D.1. Compliance with PoA-DD and/or CPA-DD form(s)

<b>Means of validation</b>	DR
<b>Findings</b>	CL 07 was raised. Please refer to Appendix 4.
<b>Conclusion</b>	<p>CC IPL confirms the following:</p> <ul style="list-style-type: none"> <li>The compliance of the revised PoA-DD (both in tracked-change and clean versions) /01-6/ with the valid version of the applicable PoA-DD form and the instructions therein for filling out the respective form.</li> <li>CME has used the latest version of the CDM-PoA-DD form and assessment team confirms that the information transferred to the later version of the PoA-DD are materially the same as that in the registered PoA-DD.</li> <li>The registered PoA-DD was in small-scale template. Due to PRC (addition of ACM0002 which is a large scale methodology), CME has rightly adopted the large-scale PoA-DD template.</li> </ul>

### D.2. Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline

<b>Means of validation</b>	N/A
<b>Findings</b>	N/A
<b>Conclusion</b>	N/A

### D.3. Corrections

<b>Means of validation</b>	DR, I
<b>Findings</b>	CL 01, CL 04 and CL 08 were raised. Please refer to Appendix 4.
<b>Conclusion</b>	<p>Following corrections have been made in the registered PoA-DD:</p> <ol style="list-style-type: none"> <li>Annex 1 party Netherland including the entity (Mabanaft Carbon B.V.) has been deleted and a new Annex 1 party, Germany with a new entity (Carbonbay GmbH &amp; Co., KG) has been included in the revised PoA-DD /01-6/. The change was accepted after reviewing the project page of the PoA on UNFCCC web site and the LoA received from Germany /02/.</li> <li>Other corrections (addition or deletions) are primarily due to the adoption of latest template of the CDM-PoA-DD-FORM.</li> </ol> <p>Based on the above, validation team accepted all proposed corrections in the PoA-DD and confirms that the corrected information is an accurate reflection of actual project information.</p>

### D.4. Changes to the start date of the crediting period

<b>Means of validation</b>	N/A
<b>Findings</b>	N/A
<b>Conclusion</b>	N/A

### D.5. Inclusion of a monitoring plan in a registered PoA

<b>Means of validation</b>	N/A
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<b>Findings</b>	N/A
<b>Conclusion</b>	N/A

#### D.6. Permanent changes from registered monitoring plan, monitoring methodology or standardized baseline

<b>Means of validation</b>	DR, I
<b>Findings</b>	--
<b>Conclusion</b>	<p>In the registered PoA-DD /B02/, project emissions due to on-site fossil fuel consumption was considered under AMS I.D. This has been removed in the revised PoA-DD. Validation team deemed this acceptable.</p> <p>Paragraph 20 of AMS I.D, version 17.0 states:  <i>“For most renewable energy project activities, <math>PE_y = 0</math>. However, for the following categories of project activities, project emissions have to be considered following the procedure described in the most recent version of ACM0002.</i></p> <ul style="list-style-type: none"> <li>• <i>Emissions related to the operation of geothermal power plants (e.g. noncondensable gases, electricity/fossil fuel consumption);</i></li> <li>• <i>Emissions from water reservoirs of hydro power plants.”</i></li> </ul> <p>As the PoA does not involve geothermal power plants or hydro power plants, the validation team has accepted the non-consideration of project emissions due to fossil fuel consumption in the PoA and thus the revision in monitoring plan (removal of the monitoring parameters: “Net quantity of on-site fossil fuel, i, for process, j, consumed in year, y”; “CO<sub>2</sub> emission coefficient of on-site fossil fuel, i, consumed in year, y”).</p> <p>Also the monitoring parameter “EG<sub>BL,y</sub>” has been further elaborated in the revised PoA-DD in a transparent manner.</p> <p>In the revised PoA-DD, CME has introduced the export and import electricity monitoring parameters separately which are directly monitored. This is deemed acceptable to the validation team for better clarity and transparency.</p> <p>In the revised PoA-DD, CME has introduced the apportioning methodology for the monitoring of net electricity supplied to the grid if and when applicable (for the methodology AMS I.F, apportioning may be applicable in case of supply of electricity through grid). The validation team has accepted this based on the local and sectoral expertise of the team. In India, some of the State Electricity Boards, follow the method of apportioning (where multiple project owners are involved for monitoring of electricity by the same energy meter at sub-station) and issue a certificate to individual project owners for the net electricity supplied to grid after taking into account the losses. Based on this certificate the project owner raises the Invoice and also calculates emission reductions. Based on sectoral expertise of the validation team, the apportioning methodology as stated in the PoA-DD will be applied wherever applicable is found to be correct.</p> <p>The validation team confirms that the permanent changes are unlikely to lead to a reduction in the accuracy of the calculation of emission reductions.</p>

#### D.7. Types of changes specific to afforestation and reforestation activities

<b>Means of validation</b>	N/A
<b>Findings</b>	N/A
<b>Conclusion</b>	N/A

#### D.8. Changes to the programme design of a registered PoA

<b>Means of validation</b>	DR, I
<b>Findings</b>	CL 02, CL 03, CL 05 and CL 06 were raised. Please refer to Appendix 4.
<b>Conclusion</b>	Two additional methodologies AMS I.F (version 03.0) and ACM0002 (version 17.0) have been included in the PoA. Also, apart from the solar technology in the registered PoA, wind based power plants have also been included in the PoA. Furthermore, the design change provides the possibility either wind or solar

technology to be used in a single CPA (and not combination of any of the two energy technology in a single CPA). However, CME has prepared one generic CPA-DD for each of the three applied methodologies. That is, under each of the three generic CPA-DDs, CME has stated solar or wind energy technology. Accordingly, in any of the real case CPA-DDs, there will be only one energy technology involved (and not combination of the energy technologies). As the emission reduction calculation procedure does not differ for the two energy technologies, the validation team has deemed this acceptable in accordance with §207 (footnote 21) of PS, version 09.0 which states “*However, separate generic CPA-DDs are not required to cover cases that do not differ in terms of emission reduction calculations...*”. Hence the validation team also confirms the compliance of §269 of VVS, version 09.0. Due to this addition of technology and the two new methodologies in the PoA, the relevant sections of the PoA-DD have been revised including the eligibility criteria. The validation team further confirms that the project boundary, baseline scenario, emission reduction calculation approach and the monitoring plan in the revised PoA-DD comply with the respective methodology’s requirements.

CME has included the possibility of financial additionality. Validation team confirms the approach of the financial analysis (including selection of benchmark and all the input parameters) to be in line with the Methodological Tool: Investment Analysis” based on the sectoral expertise. Hence the validation team confirms the compliance of §15(a)(i) of “The standard of Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities”, version 4.

Eligibility criteria have now been done in four parts:

1. Generic eligibility criteria applicable for all the 3 type of CPAs;
2. Small scale CPA criteria;
3. Micro scale CPA criteria; and
4. Large scale CPA criteria.

The validation team confirms that as per §18(c) of the “Standard of Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities” version 4, the eligibility criteria has covered the specifications of technology/measure including the level and type of service, performance specifications including compliance with testing/certifications which is deemed appropriate.

Due to addition of wind technology, Section E of the PoA-DD (Environmental Impacts) has been appropriately revised to cover both the technologies (wind and solar) to be covered in the PoA. The renewable energy projects to be included in the PoA do not fall under the predefined list of the Ministry of Environment and Forests (Government of India) notification dated September 14, 2006 requiring environmental Impact Assessment (EIA) studies. Validation team based on local and sector expertise confirms that environmental impact analysis is not required for the PoA / CPAs.

The validation team based on review of the revised PoA-DD /01-6/ against applicable additionality and methodological requirements concludes that the proposed changes would not adversely affect the conclusions of the validation report of the registered PoA-DD with regard to:

- Additionality of the registered PoA
- Applicability and application of the approved baseline methodology under which the CDM PoA has been registered; or
- The compliance of the monitoring plan with the applied monitoring methodology;
- The eligibility criteria of the registered CDM PoA

All the above points have been further elaborated in the revised PoA-DD to cover the added technology and the two methodologies.

Scale of the PoA has been changed from small scale to large scale due to addition

	<p>of the large-scale methodology, ACM0002 (version 17.0).</p> <p>The validation team confirms that the above design changes are in line with paragraph 290 (e) of the PS, version 09.0 /B01-2/ and the above assessment confirms the compliance of paragraph 320 of VVS, Version 09.0 /B01-1/.</p> <p>The validation team further confirms that the proposed change does not fall under "Appendix 1 - Changes that do not require prior approval by the Executive Board of the clean development mechanism" of PS version 09.0 and hence it requires prior approval by the Board.</p>
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#### **D.9. Changes to project design of generic component project activities or specific-case component project activities**

<b>Means of validation</b>	N/A
<b>Findings</b>	N/A
<b>Conclusion</b>	N/A

#### **SECTION E. Internal quality control**

The final validation report passed a technical review and quality reviewer 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**

The Project Participant has commissioned Carbon Check (India) Private Ltd., (CC IPL) to perform the validation of the Post Registration Changes "Corrections; Permanent changes from registered monitoring plan, monitoring methodology or standardized baseline; Changes to the programme design of a registered PoA" to the CDM Programme of Activities (PoA) "India Small Scale Solar PV Programme of Activities" in India (hereafter "PoA").

CC IPL confirms that the proposed changes do not fall under "Appendix 1. Changes that do not require prior approval by the Executive Board of the clean development mechanism" of PS (version 09.0) /B01-2/ and hence it requires prior approval by the Board.

CC IPL based on review of the revised PoA-DD /01-6/ and interview with the CME / PP confirms that the proposed corrections that the coordinating/managing entity have proposed for the PoA is:

- An accurate reflection of actual project or programme information; and/or
- In accordance with the applied methodologies, the registered monitoring plan.

The proposed permanent changes in the monitoring plan are unlikely to lead to a reduction in the accuracy of the calculation of emission reductions. The validation team confirms that the revised monitoring plan does not reduce the level of accuracy of the monitoring compared with the requirements contained in the registered PoA-DD.

The version of the template for PoA-DD was updated to the latest version of template. This change was assessed to confirm the compliance of filling guideline and CCIPL confirms that the revised PoA-DD, as provided by the CME, comply with the filling instructions of the PoA-DD. CCIPL confirms the following:

- a) The compliance of the revised PoA-DD (both in tracked-change and clean versions) with the valid version of the applicable PoA-DD form and the instructions therein for filling out the form.
- b) Since the CME has used the latest version of the CDM-PoA-DD form, assessment team confirms that the information transferred to the later version of the PoA-DD are materially the same as that in the registered PoA-DD.
- c) The registered PoA-DD was in small-scale template. Due to PRC (addition of ACM0002 which is a large scale methodology), CME has rightly adopted the large-scale PoA-DD template.

The validation team can confirm that the programme design was changed in accordance with the requirements of UNFCCC CDM. The DOE therefore accepts the changes and requests for the approval of "Corrections; Permanent changes from registered monitoring plan, monitoring methodology or standardized baseline; Changes to the programme design of a registered PoA".

Eight (08) clarifications (CLs) and one (one) corrective action request were raised during the validation process and all of them have been successfully closed by the CME.

Carbon Check India Private Ltd. concludes the validation with a positive opinion that the Programme of Activities "India Small Scale Solar PV Programme of Activities" in India, meets all applicable UNFCCC CDM for post-registration changes and therefore recommends for the approval of "Corrections; Permanent changes from registered monitoring plan, monitoring methodology or standardized baseline; Changes to the programme design of a registered PoA".



## Appendix 1. Abbreviations

Abbreviations	Full Texts
BE	Baseline Emission
CAR	Corrective Action Request
CC IPL	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 <sub>2</sub>	Carbon Dioxide
CO <sub>2</sub> 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
I	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
VVS	Validation and Verification Standard

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



**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 <sup>1</sup>	<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"/>
TA 1.2	<input checked="" type="checkbox"/>	TA 4.1	<input checked="" type="checkbox"/>	TA 8.1	<input type="checkbox"/>	TA 10.1	<input type="checkbox"/>	TA 14.1	<input type="checkbox"/>
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"/>		

*Vikash K. Singh*  
Mr. Vikash Kumar Singh  
Compliance Officer

*Amit*  
Mr. Amit Anand  
CEO

**Date of Approval**  
23/12/2016

**Valid Till**  
22/12/2017

### 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

<sup>1</sup>India

### CARBON CHECK (INDIA) PRIVATE LIMITED

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## Carbon Check (India) Private Ltd.

### Amit Anand

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 <sup>1</sup>	<input checked="" type="checkbox"/>

In the following Technical Areas:

TA 1.1	<input type="checkbox"/>	TA 3.1	<input checked="" type="checkbox"/>	TA 5.2	<input type="checkbox"/>	TA 9.2	<input type="checkbox"/>	TA 13.2	<input type="checkbox"/>
TA 1.2	<input checked="" type="checkbox"/>	TA 4.1	<input type="checkbox"/>	TA 8.1	<input checked="" type="checkbox"/>	TA 10.1	<input type="checkbox"/>	TA 14.1	<input checked="" type="checkbox"/>
TA 2.1	<input type="checkbox"/>	TA 5.1	<input type="checkbox"/>	TA 9.1	<input type="checkbox"/>	TA 13.1	<input checked="" type="checkbox"/>		

Mr. Vikash Kumar Singh  
Compliance Officer

Date of Approval  
23/12/2016

Valid Till  
22/12/2017

#### Revision History of the Document

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

<sup>1</sup>India, South Africa

#### **CARBON CHECK (INDIA) PRIVATE LIMITED**

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### Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
/01/	Mabanaft Carbon India Private Limited	1. Revised PoA-DD 2. PoA-DD 3. PoA-DD 4. PoA-DD 5. PoA-DD 6. Final PoA-DD (track change and clean versions)	Version: 5.0, dated :28/12/2016 Version: 6.0, dated :30/01/2017 Version: 7.0, dated :31/03/2017 Version: 8.0, dated :12/04/2017 Version: 9.0, dated :18/04/2017 Version: 10.0, dated :29/06/2017	CME
/02/	DNA Germany	LoA from Germany	-	CME
/B01/	UNFCCC	1. CDM Validation and Verification Standard (Version 09.0). 2. CDM Project Standard (Version 09.0) 3. CDM Project Cycle Procedure (Version 09.0)	<a href="http://cdm.unfccc.int/">http://cdm.unfccc.int/</a>	Others
/B02/	UNFCCC	PoA-DD, version 4.0, 09/07/2012 and the corresponding validation report for the registered PoA UNFCCC Ref. No. 8426	<a href="http://cdm.unfccc.int/">http://cdm.unfccc.int/</a>	Others
/B03/	UNFCCC	1. AMS-I.D. "Grid connected renewable electricity generation" (version 17.0) 2. AMS I.F. "Renewable electricity generation for captive use and mini-grid" (version 3.0) 3. ACM 0002 "Grid-connected electricity generation from renewable sources" (version 17.0)	<a href="http://cdm.unfccc.int/">http://cdm.unfccc.int/</a>	Others
/B04/	UNFCCC	Programme design document form for CDM programmes of activities (CDM-PoA-DD-FORM), (Version 06.0) and Instructions therein	<a href="http://cdm.unfccc.int/">http://cdm.unfccc.int/</a>	Others
/B05/	UNFCCC	Standard: Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities, version 04.0	<a href="http://cdm.unfccc.int/">http://cdm.unfccc.int/</a>	Others
/B06/	UNFCCC	Methodological Tool: Tool for the demonstration and assessment of additionality, version 07.0	<a href="http://cdm.unfccc.int/">http://cdm.unfccc.int/</a>	Others
/B07/	UNFCCC	Methodological Tool: Demonstration of additionality of small scale project activities, version 10.0	<a href="http://cdm.unfccc.int/">http://cdm.unfccc.int/</a>	Others
/B08/	UNFCCC	Methodological Tool: Assessment of debundling for small-scale project activities, version 4.0	<a href="http://cdm.unfccc.int/">http://cdm.unfccc.int/</a>	Others
/B09/	UNFCCC	Methodological Tool: Investment analysis, version 06.0	<a href="http://cdm.unfccc.int/">http://cdm.unfccc.int/</a>	Others
/B10/	UNFCCC	Glossary of CDM Terms, version 07.0	<a href="http://cdm.unfccc.int/">http://cdm.unfccc.int/</a>	Others
/B11/	UNFCCC	Methodological Tool: Demonstration of additionality of micro scale project activities, version 07.1	<a href="http://cdm.unfccc.int/">http://cdm.unfccc.int/</a>	Others
/B12/	UNFCCC	Guidelines: General guidelines for SSC CDM Methodologies, version 21.0	<a href="http://cdm.unfccc.int/">http://cdm.unfccc.int/</a>	Others
/B13/	UNFCCC	Tool to calculate the emission factor for an electricity system, version 05.0	<a href="http://cdm.unfccc.int/">http://cdm.unfccc.int/</a>	Others

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

Table 1. CL from this validation

<b>CL ID</b>	01	<b>Section no.</b>	D.3	<b>Date:</b> 10/01/2017
<b>Description of CL</b>				
On the cover page of the PoA-DD, Germany has been stated as the host party including India. CME needs to clarify.				
<b>CME response</b>				<b>Date:</b> 30/01/2017
The project involves Host Party from India, thus Germany is removed from PoA DD.				
<b>Documentation provided by CME</b>				
Revised PoA DD				
<b>DOE assessment</b>				<b>Date:</b> 09/02/2017
Germany has been deleted in the revised PoA-DD and India is the only party involved in the PoA. CL is closed.				

<b>CL ID</b>	02	<b>Section no.</b>	D.8	<b>Date:</b> 10/01/2017
<b>Description of CL</b>				
Version of the methodology ACM 0002 has been stated as 17 in some sections and 18 in other sections of the PoA-DD.				
<b>CME response</b>				<b>Date:</b> 30/01/2017
The version of methodology ACM0002 is mentioned as 17 in all parts of PoA DD. This is latest version of methodology.				
<b>Documentation provided by CME</b>				
Revised PoA DD				
<b>DOE assessment</b>				<b>Date:</b> 09/02/2017
Latest version of the methodology ACM 0002 (version 17) has been adopted. CL is closed.				

<b>CL ID</b>	03	<b>Section no.</b>	D.8	<b>Date:</b> 10/01/2017
<b>Description of CL</b>				
In Part I, section A.2 of the PoA-DD, it has been stated " <i>The PoA will provide a platform for CPA implementers and/or project owners of any kind of renewable projects like solar, wind to overcome existing barriers through additional cash-flow from carbon revenues</i> ". CME needs to clarify whether the PoA will be limited to only solar and wind projects?				
<b>CME response</b>				<b>Date:</b> 30/01/2017
The revised POA DD is limited to solar and wind technology only.				
<b>Documentation provided by CME</b>				
Revised PoA DD				
<b>DOE assessment</b>				<b>Date:</b> 09/02/2017
It has been clarified that the PoA will only involve solar and wind projects. CL is closed.				

<b>CL ID</b>	04	<b>Section no.</b>	D.3	<b>Date:</b> 10/01/2017
<b>Description of CL</b>				
In Part I, section A.4 of the PoA-DD, Germany has been included as a new Annex I party for the PoA and Netherlands (in the registered PoA) has been removed. This change has not been included in Appendix 6 of the PoA-DD. CME also needs to submit LoA from Germany.				
<b>CME response</b>				<b>Date:</b> 30/01/2017
The PoA DD is revised accordingly.				
<b>Documentation provided by CME</b>				
Revised PoA DD				
<b>DOE assessment</b>				<b>Date:</b> 09/02/2017
Annex 1 PP from Netherlands has been withdrawn and a new Annex 1 PP from Germany (Carbonbay GmbH & Co., KG) is included. This change in PP is also shown in Appendix 6 of the PoA-DD. The change in PP is visible on the project page of the PoA on UNFCCC website including the LoA from Germany. Hence the CL is closed.				

<b>CL ID</b>	05	<b>Section no.</b>	D.3	<b>Date:</b> 10/01/2017
<b>Description of CL</b>				
In Part I, section A.6 of the PoA-DD, it is not clear whether the electricity will be sold to third party or captive consumption, apart from sale to grid. Also the baseline scenarios have not been defined as per the three methodologies.				
<b>CME response</b>				<b>Date:</b> 30/01/2017
In PART 1 – section A.6- The transparent description is mentioned. The CPA will be grid connected which can supply electricity to grid, or sell generated electricity to third party or can use for captive purpose. Also PoA includes renewable energy generation technologies (solar/wind) that supply electricity to users for captive use/mini grid.				
<b>Documentation provided by CME</b>				
Revised PoA DD				
<b>DOE assessment</b>				<b>Date:</b> 09/02/2017
In the revised PoA-DD, CME has clarified that the electricity generated by the CPAs may be even sold to third party or used for captive consumption also. Baseline scenarios for the three applied methodologies have been described in the PoA-DD. The CL is closed.				

<b>CL ID</b>	06	<b>Section no.</b>	D.3	<b>Date:</b> 10/01/2017
<b>Description of CL</b>				
In Part I, section B.2 of the PoA-DD, CME needs to clarify whether AMS I.D and AMS I.F can be applied together in any of the CPAs? If yes, then separate g-CPA-DD for this combination has not been submitted. Also all the relevant paragraphs of the micro scale additionality have not been applied for the micro scale projects.				
<b>CME response</b>				<b>Date:</b> 30/01/2017
PoA DD is revised and any one methodology will be used for each CPA and not combination of both. Thus no separate Part II is required for this change. Only applicable para of micro scale auto additionality are included in PoA DD.				
<b>Documentation provided by CME</b>				
Revised PoA DD				
<b>DOE assessment</b>				<b>Date:</b> 09/02/2017
CME has clarified that only one of the methodologies will be applied for any one CPA (and not combination of any two methodologies). The applicable paragraphs for micro scale additionality have been included. The CL is closed.				

<b>CL ID</b>	07	<b>Section no.</b>	D.1	<b>Date:</b> 10/01/2017
<b>Description of CL</b>				
Start date of the PoA-DD has been incorrectly stated in some parts of the PoA-DD.				
<b>CME response</b>				<b>Date:</b> 30/01/2017
The start date of PoA DD has been corrected in revised PoA DD.				
<b>Documentation provided by CME</b>				
Revised PoA DD				
<b>DOE assessment</b>				<b>Date:</b> 09/02/2017
The GSC start date for the PoA is 12/01/2012 and the start date of the PoA is 31/12/2012. This has been clearly stated in the PoA-DD. CL is closed.				

<b>CL ID</b>	08	<b>Section no.</b>	D.3	<b>Date:</b> 10/01/2017
<b>Description of CL</b>				
In Appendix 1 of the PoA-DD it is found that there are two CMEs: Mabanft Carbon India Private Limited and Mabanft Carbon B.V. CME is requested to clarify.				
<b>CME response</b>				<b>Date:</b> 30/01/2017
The same is corrected in revised PoA DD. Mabanft Carbon India Private Limited is CME for this PoA.				
<b>Documentation provided by CME</b>				
Revised PoA DD				
<b>DOE assessment</b>				<b>Date:</b> 09/02/2017
In the revised PoA-DD only one CME (Mabanft Carbon India Private Limited) is included. CL is closed.				

Table 2. CAR from this validation

<b>CAR ID</b>	01	<b>Section no.</b>	Against UNFCCC Completeness check query	<b>Date:</b> 20/06/2017
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Description of CAR	
<p>The following issues were raised by UNFCCC during completeness check:</p> <p>Issue 1: The revised PoA will apply multiple methodologies and multiple technologies, the PoA-DD has not provided a clear list of all possible combinations of technologies. The DOE is requested to further clarify how it has validated that the generic CPAs and their eligibility criteria for multiple technologies/methodologies in the revised PoA-DD are in line with PS v9 paragraph 207, which requires that “for PoAs applying more than one technology/measure or more than one methodology, the CME shall prepare a generic CPA for each technology/measure, each methodology and each combination thereof.”</p> <p>Issue 2: As per the standard of Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities version 4, paragraph 18(c), the eligibility criteria shall cover “the specifications of technology/measure including the level and type of service, performance specifications including compliance with testing/certifications. The PP/DOE is requested to further substantiated how the revised eligibility criteria in the revised PoA-DD and generic CPA-DDs are adequately described as per para 18(c) of the standard, considering that only “capacity and choice of technology” will be included in the specific CPA-DD as indicated in the PoA-DD.</p> <p>Issue 3: The standard of Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities version 4, paragraph 15(a)(i) requires that the CME shall define the input parameters that will be used in the investment analysis together with a description of how the values for these parameters will be obtained for each CPA. The DOE is requested to further substantiated how it has validated that the PoA-DD has defined sufficient input parameters and the descriptions of how the values will be obtained, in particular, the input parameters used to calculate the CAPM model and WACC model. The PP/DOE is also requested to indicate whether the IRR in real term or nominal term will be applied.</p> <p>Issue 4: As per page 21 of the revised PoA-DD, the description of Environmental impact has been revised. The DOE has only taken note in the validation opinion page 6 that the PoA-DD section E (Environmental Impacts) has been appropriately revised to cover both technologies. The DOE is requested to further clarify how it has validated that the statement in PoA-DD section E is authentic.</p> <p>Issue 5: (a) Page 73 of the revised PDD states that “the apportioning procedure of power plants connected to mini grid or captive use will be followed by the respective state electricity board and PP do not have any control on it. The state electricity board provides the value of net electricity supplied to grid and same will be used for emission reduction calculations”. The DOE is requested to further clarify how it has validated that the apportioning procedure is applicable to CPAs using AMS.I.F. (b) For CPAs applying AMS.I.D and ACM0002, the DOE is requested to clarify how the calculated value obtained from the state electricity board is in line with the requirement of “TOOL05 Methodological tool: Baseline, project and/or leakage emissions from electricity Consumption and monitoring of electricity generation”, table 12, which requires that “If EGfacility,y is calculated then the following parameters shall be measured: (i) The quantity of electricity supplied by the project plant/unit to the grid; and (ii) The quantity of electricity delivered to the project plant/unit from the grid”. The monitoring shall at least include the direct monitoring of electricity generated by all the project power units.</p>	
CME response	Date: 29/06/2017
<p>Issue 1: PoA DD is revised with mention of CPA will include any one technology and any one methodology and not combination of two or more technologies and methodology. As per footnote 21 of PS version 09, “However, separate generic CPA-DDs are not required to cover cases that do not differ in terms of emission reduction calculations”. In section A.1 of Generic CPA DD – sentence is mentioned as “Since the solar or wind technologies do not differ in terms of emission reduction calculations, single generic CPA is prepared for all technologies.”. Also in title of all three cases, “ solar or wind technology” is mentioned.</p> <p>The generic CPAs based on methodology are mentioned in PoA DD as per para 29 of the standard Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities version 4.</p> <p>As per para 269 of VVS version 09, the technologies ( wind or solar) are combined in one generic CPA DD as per footnote 21 of PS version 09 as these technologies do not differ in terms of emission reduction calculations.</p> <p>Issue 2: As per para 18 c) of standard of Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities version 4, the PoA DD has mentioned the</p>	

1. specification of technology – Type of technology and capacity, The CPA shall employ standard technology and specifications of the manufacturer and/or best practices of the market.
2. level of implementation i.e green field project,
3. Type of service i.e projects connected to grid/mini grid,
4. Performance specifications - CPA should install renewable energy technology that have Approval / certification from the relevant designated authority

Issue 3: The PoA DD is revised with mention of input parameters for CAPM and WACC and their sources to be used for CPA where investment analysis is applicable. The PoA DD clearly mentioned that IRR is in nominal term.

Issue 4: The Environmental Impact Analysis is revised with inclusion of wind energy technology and it is mentioned solar and wind projects do not require EIA as per the Ministry of Environment and Forests (Government of India) notification dated September 14, 2006. Hence, environmental impact analysis is not required for the PoA and also for the CPA. The same statement need to validate.

Issue 5:

- a) For AMS I.F methodology, the apportioning possibility is there. The below sentence is added in revised PoA DD “ Whenever the generated electricity is supplied to user through grid network of state electricity board, the net electricity export to grid is the quantity of net electricity displaced by the project activity. There is possibility that common meter is involved in such cases” . Only in case of mini grid, apportioning may not possible.
- b) The monitoring plan is revised with mentioned of type of measurement as measured and calculated and also meter type as “Electronic Trivector Bi-directional meter” is mentioned. This meter measures both export and import of project activity and the difference of measured value of export and import will be used to determine the net electricity export to grid. Since export and import are directly monitored from meters and net electricity export is determined by state electricity board from measured values of meters. PP have value of net electricity export or electricity displaced by project activity, hence only net electricity supplied to grid is mentioned as monitoring parameter.

#### Documentation provided by CME

Revised PoA-DD

#### DOE assessment

Date: 01/07/2017

Issue 1: A CPA within this PoA will consist of a single renewable technology (solar or wind energy technology) and use any one of three methodologies but never a combination of any of the applied methodologies. However, CME has prepared one generic CPA-DD for each of the three applied methodologies. That is, under each of the three generic CPA-DDs, CME has stated solar or wind energy technology. Accordingly, in any of the real case CPA-DDs there will be only one energy technology involved (and not combination of the energy technologies). As the emission reduction calculation procedure does not differ for the two energy technologies, the validation team has deemed this acceptable in accordance with §207 (footnote 21) of PS, version 09.0 which states “*However, separate generic CPA-DDs are not required to cover cases that do not differ in terms of emission reduction calculations...*”. Hence the validation team also confirms the compliance of §269 of VVS, version 09.0. This part of the finding is closed.

Issue 2: In the revised PoA-DD, CME has stated the compliance for each of the parameters as stated in para 18 c) of standard of Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities version 4, viz.:

1. specification of technology – Type of technology and capacity, The CPA shall employ standard technology and specifications of the manufacturer and/or best practices of the market.
2. level of implementation i.e green field project,
3. Type of service i.e projects connected to grid/mini grid,
4. Performance specifications - CPA should install renewable energy technology that have Approval / certification from the relevant designated authority.

This is deemed acceptable and hence this part of the finding is closed.

Issue 3: In the revised PoA-DD CME has stated source for the input parameters including that for CAPM / WACC.model. Also it has been stated that the IRR will be in nominal terms.

Validation team confirms the approach of the financial analysis (including selection of benchmark and all the



input parameters) to be in line with the Methodological Tool: Investment Analysis” based on the sectoral expertise. Hence the validation team confirms the compliance of §15(a)(i) of “The standard of Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities”, version 4. This part of the finding is closed.

Issue 4: The renewable energy projects to be included in the PoA do not fall under the predefined list of the Ministry of Environment and Forests (Government of India) notification dated September 14, 2006 requiring environmental Impact Assessment (EIA) studies. Validation team based on local and sector expertise confirms that environmental impact analysis is not required for the PoA / CPAs as stated in the PoA-DD. This part of the finding is closed.

Issue 5: a) Apportioning procedure for AMS I.F methodology will be applicable in the case where electricity is supplied through grid. This has been further clarified in the PoA-DD and the validation report.

b) CME has introduced two separate monitoring parameters which are directly monitored (export and import electricity). Validation team deems this acceptable. Hence the finding is closed.

**Table 3. FAR from this validation**

<b>FAR ID</b>	xx	<b>Section no.</b>		<b>Date:</b> DD/MM/YYYY
<b>Description of FAR</b>				
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<b>CME's response</b>				<b>Date:</b> DD/MM/YYYY
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<b>Documentation provided by CME</b>				
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<b>DOE assessment</b>				<b>Date:</b> DD/MM/YYYY
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