

VALIDATION REPORT

Regent Climate Connect Knowledge Solution Private Ltd

Title of CPA:

CarbonSoft Emerging Markets CPA01

Title of PoA to which CPA is to be included:


“CarbonSoft Open Source PoA, LED Lighting Distribution:
Emerging Markets”

Report No CCL0097/CSLLDEM/28112011

Revision No 02

VALIDATION REPORT

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CPA Title: CarbonSoft Emerging Markets CPA01		Country: India		Estimated CERs (tCO₂e): 3,968 annual average (CPA- 01)																
Managing Entity: Regent Climate Connect Knowledge Solution Private Ltd Nitin Tanwar 625, 7th Floor, Westend Mall Janakpuri West New Delhi, India		CPA Implementer: Eureka Forbes Ltd Goutam Reddy Ganpatrao Kadam Marg, Lower Parel, Marathon Innova Mumbai, Maharashtra, India Telephone: 0091 22 30449848 e-mail: goutam.reddy@eurekaforbes.in																		
GHG reducing measure/technology of the CPAs of the PoA:		The GHG emission reductions are attributed to displacement of fossil fuel (namely kerosene fuel) for domestic/non-residential lighting in southern region of India with Solar LED lamps for lighting applications. The states included in the CPA boundary are Karnataka, Kerala, Andhra Pradesh and Tamil Nadu																		
Report No.: CCL0097/CSLLDEM/28112011		Revision: 02		Date of this report: 20/12/2012																
Approved by (Final Report): Priyesh Ramlall 			Date of approval: 23/12/2012																	
Technical Reviewer: Vikash Kumar Singh				Date of approval: 21/12/2012																
GPS coordinates of the first CPA:		The verified geographic coordinates /02/,/B06-18/ of the geographical boundary of the CPA as:																		
		<table border="1"> <thead> <tr> <th>State</th> <th>Latitude</th> <th>Longitude</th> </tr> </thead> <tbody> <tr> <td>Karnataka</td> <td>15° 00' N</td> <td>75° 00' E</td> </tr> <tr> <td>Kerala</td> <td>10° 00' N</td> <td>76° 25' E</td> </tr> <tr> <td>Andhra Pradesh</td> <td>16° 00' N</td> <td>80° 00' E</td> </tr> <tr> <td>Tamilnadu</td> <td>11° 00' N</td> <td>78° 00' E</td> </tr> </tbody> </table>				State	Latitude	Longitude	Karnataka	15° 00' N	75° 00' E	Kerala	10° 00' N	76° 25' E	Andhra Pradesh	16° 00' N	80° 00' E	Tamilnadu	11° 00' N	78° 00' E
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Tamilnadu	11° 00' N	78° 00' E																		
Organisational Unit: Carbon Check (Pty) Ltd																				
Report Distribution: <input type="checkbox"/> Unrestricted Distribution <input type="checkbox"/> Limited Distribution <input checked="" type="checkbox"/> No Distribution (without permission from the Client or responsible organisational unit)																				
Methodology																				
Number: AMS-III.AR	Version: 03	Title: Substituting fossil fuel based lighting with LED/CFL lighting systems		Scale: Small Scale	SS(s): 1 TA (s): 1.2															
Carbon Check Pty Ltd., (CCL) is commissioned by "Regent Climate Connect Knowledge Solution Private Ltd" (the CME) to perform the validation of the Program of activities "CarbonSoft Open Source PoA, LED Lighting Distribution: Emerging Markets", with regard to the relevant requirements for CDM activities.																				
Summary of the CPA Validation and inclusion Opinion:																				
<input checked="" type="checkbox"/> The review of the CPA design documentation and the subsequent follow-up interviews have provided CCL with sufficient evidence for the determination of the CPA's fulfillment of all stated criteria in the PoA. In our opinion, the CPA meets all relevant UNFCCC requirements for the CDM. Therefore, CCL recommends the CPA for inclusion under the PoA to the CDM Executive Board (CDM-EB).																				
<input type="checkbox"/> The review of the CPA design documentation and the subsequent follow-up interviews has not provided CCL with sufficient evidence for the determination of the CPA's fulfillment of all stated criteria in the PoA. Therefore, CCL will not recommend the CPA for inclusion under the PoA and will inform the PoA managing entity, CPA implementer(s) and the CDM Executive Board of this decision.																				

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Validation Team		Role				
Full Name	Appointed for Sectoral scopes (Technical Areas)	Team Leader	Team Member (Auditor)	Local Expert	Technical Expert	Technical Reviewer
Ravi Shankar	1.2, 2.1, 2.2, 3.1, 13.1	X	X	X	X	
Amit Anand	1.2, 13.1		X	X	X	
Anubhav Dimri	1.2		X	X	X	
Vikash Kumar Singh	1.2, 3.1, 13.1					X

Validation Phase	Validation Status
<input checked="" type="checkbox"/> Desk Review	<input type="checkbox"/> Corrective Actions / Clarifications requested
<input checked="" type="checkbox"/> Follow up interviews	<input checked="" type="checkbox"/> Full approval and submission for registration
<input checked="" type="checkbox"/> Resolution of outstanding issues	<input type="checkbox"/> Rejected

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Executive Summary - Validation Opinion

Under the validation (by means of document review and on-site interviews with stakeholders), the validation team considers that the CPA description in CPA titled- "CarbonSoft Emerging Markets CPA01" as described in the CDM-SSC-CPA-DD of Date 26/11/2012, version 05 is accurate and complete; meets the requirements to be included in the PoA titled "CarbonSoft Open Source PoA, LED Lighting Distribution: Emerging Markets", version: 05 and correctly applies the baseline and monitoring methodology AMS-III.AR, version 03.

Standard auditing techniques have been used for the validation of the project. An analysis, as provided by the applied methodology, demonstrates that the proposed CPA is not a likely baseline scenario. Emission reductions attributable to the CPA are additional to any that would occur in the absence of the project activity. Given that the CPA is implemented as designed, the project is likely to achieve the estimated amount of emission reductions as specified within the CPA-DD /02/.

The validation is based on the information made available to Carbon Check (Pty) Ltd., as well as the engagement conditions detailed in this report. The validation has been performed following the VVM requirements.

The validation was executed in the following steps so far:

- Receipt of PoA DD (without version number and date), CPA DD (generic) and CPA DD (real case) (without version number and dated 20/12/2011) for global stakeholder comments.
- Global stakeholder comment process (23/12/2011 – 21/01/2012)
- On-site visit with stakeholder interviews (27/11/2011)
- Issue of checklist with corrective action requests (CARs) and clarification requests (CLs) and the draft validation report and protocol
- Desk review of revised DDs applying AMS-III.AR, version 03
- Review of responses for CARs/CLs
- Issue of the final validation report and protocol

During the course of validation a total of 10 (Ten) Corrective Action Requests (CARs) and 10 (Ten) Clarification Requests (CLs) were identified on webhosted CPA-DD/01/. Upon evaluation of responses provided by the Project Participant (CPA implementer) all the identified issues were closed successfully. One (01) Forward Action Request (FAR) has been raised during course of validation.

The single purpose of this report is its use during the inclusion process (of the real case CPA) at the time of requesting registration. The review of the CPA-DD /02/, subsequent follow-up interviews, and further verification of references have provided Carbon Check (Pty) Ltd., with sufficient evidence to determine the fulfilment of stated criteria in the PoA-DD /04/ and CPA DD /02/. In the opinion of Carbon Check (Pty) Ltd., the CPA meets all relevant UNFCCC requirements for the CDM if the underlying assumptions do not change. Carbon Check (Pty) Ltd., recommends the real case CPA and the PoA for registration.

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Abbreviations

BE	Baseline Emissions
CAR	Corrective Action Request
CC	Cross Check
CCL	Carbon Check (Pty) Ltd
CDM	Clean Development Mechanism
CDM M&P	Modalities and Procedures CDM
CER(s)	Certified Emission Reduction(s)
CH ₄	Methane
CL	Clarification Request
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
CME	Coordinating/managing entity and participants of PoA
CPA	CDM Programme Activity
CPA-DD	CDM Programme Activity design document
DBT	Daily Burn Time
DR	Document Review
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board
EIA	Environmental Impact assessment
EM	Emerging Markets
ER	Emission Reductions
FAR	Forward Action Request
GHG(s)	Greenhouse gas(es)
GWP	Global Warming Potential
I	Interview or any follow up action
IPCC	Intergovernmental Panel on Climate Change
LED	Light-emitting diode
LoA	Letter of Approval
MoV	Means of Verification
MP	Monitoring Plan
MR	Monitoring Report
NA	Not Applicable/Available
NGO	Non-governmental Organization
ODA	Official Development Assistance
PE	Project Emission
PoA	Programme of Activities
PoA-DD	Programme of Activities design document
PP(s)	Project Participant(s)
Ref.	Document Reference
SD	Sustainable Development
SRT	Solar Run Time
SS(s)	Sectoral Scope(s)
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual

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1 INTRODUCTION

Regent Climate Connect Knowledge Solution Private Ltd (hereafter referred as “CME”) has commissioned the DOE, Carbon Check (Pty) Ltd., to assess the information in the CDM-SSC-CPA-DD for the CPA titled “CarbonSoft Emerging Markets CPA01” (hereafter called “the CPA”) against the requirements for including CPAs to the PoA “CarbonSoft Open Source PoA, LED Lighting Distribution: Emerging Markets” and further documentation requirements for including CPAs to a PoA.

This report summarizes the findings of the validation of the CDM Programme Activity Design Document (CPA-DD), performed on the basis of UNFCCC criteria for the PoAs under the CDM, as well as criteria given to provide for consistent programme operations, monitoring and reporting. The term “UNFCCC criteria” refers to Article 12 of the Kyoto Protocol, the simplified modalities and procedures for CDM project activities, and the subsequent decisions by the COP/MOP and CDM Executive Board. In addition to these criteria, host country criteria are also taken into account.

1.1 Objective

The assessment of a CPA requesting to be included in a PoA shall ensure that all the requirements determined in the PoA are met. The assessment was performed on the basis of the eligibility and additionality criteria established in the PoA and the UNFCCC criteria for including CPAs to programme of activities under the Clean Development Mechanism (CDM), as well as criteria given to provide for consistent project operations, monitoring and reporting according to AMS-III.AR, version 03.

1.2 Scope

The validation scope is defined as an independent and objective review by a Designated Operational Entity (DOE) of the specific CDM-SSC-CPA-DD to be included in the PoA. The DOE shall scrutinize the information in the CDM-SSC-CPA-DD to assess compliance with the eligibility criteria and criteria for demonstrating additionality established by the PoA, to check correctly application of AMS-III.AR, version 03 and to check compliance with documentation requirements for CPAs.

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

2 METHODOLOGY

The validation consists of the following four phases:

- I. A desk review of the specific CPA-DD with relevant information to be included in PoA.
- II. On-site visit and follow-up interviews with programme stakeholders; and
- III. The resolution of outstanding issues
- IV. The issuance of the final validation report and opinion.

The following sections outline each step in more detail.

2.1 Document Review

The following table lists the documentation that was reviewed during the validation.

Reference No.	Documents
/01/	CPA-DD (webhosted version) – “CarbonSoft Emerging Markets CPA01“, (without version number and dated 20/12/2011) CPA ID: EM01
/02/	CPA-DD (final version) - “CarbonSoft Emerging Markets CPA01“, Version 05, Date – 26/11/2012
/03/	PoA-DD (webhosted version), for “CarbonSoft Open Source PoA, LED Lighting Distribution: Emerging Markets“, (without version number and date)

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/04/	PoA-DD (final version) for “CarbonSoft Open Source PoA, LED Lighting Distribution: Emerging Markets”, Version 05, Date – 26/11/2012
/05/	g-CPA-DD Generic CPA (webhosted version) – Title: CarbonSoft Emerging Markets CPA [XX], [title] CPA ID: EM [XXX] Date: XX/XX/20XX
/06/	g-CPA-DD Generic CPA (final version) Title: CarbonSoft Emerging Markets CPA [XX], [title] Version: XX Date: XX/XX/20XX
/07/	Letter of Approval from the DNA of India, dated 12/10/2012, authorizing Regent Climate Connect Knowledge Solution Private Ltd, to participate as project participant and coordinating/managing entity to participate in the CDM project.
/08/	Regent Climate Connect Knowledge Solution Private Ltd: No ODA and voluntary action Declaration by CME dated 27/04/2012
/09/	Regent Climate Connect Knowledge Solution Private Ltd: CME Manual dated 27/04/2012
/10/	CER calculation sheet dated for CPA-DD corresponding to /01/
/11/	CER calculation sheet dated for CPA-DD corresponding to /02/
/12/	Eureka Forbes Ltd. : Declaration by the CPA implementer that: 1. No Official Development Assistance (ODA) or Public Funding has been used in the design and development of the above mentioned CPA. 2. EFL is aware and agreed that the project activity is included in the PoA “CarbonSoft Open Source PoA, LED Lighting Distribution: Emerging Markets” and consent to this inclusion. 3. EFL confirms that no emission reduction benefit from the CPA shall be claimed through any instrument other than the CDM, either as a standalone Project or as a bundle CPA to any other PoA. 4. Neither the CPA has been included in another PoA nor it has applied for registration as single CDM project activity. 5. That CPA meets the applicability criteria for methodology AMS.III.AR. Version 03.0. 6. This CPA is the first CPA (under this PoA) in the host country India. 7. The target group of the project lamp will be residential and/or non-residential households or communities or Small and Medium Enterprises (SMEs) and the CPA Implementer will distribute the project lamps to residential and/or non-residential households or communities or Small and Medium Enterprises. 8. The CPA is exempted from debundling checks as per the para 10, Annex 13, EB-54. Detailed description is provided in section A.4.6 of the CPA-DD.
/13/	1. Nokero International: Manufacturer's Certificate 2. Intertek Testing: Third party Test Report of Lamps dated 27/03/2012 3. Intertek Testing: Third party Test Report of Lamps dated 14/02/2012 4. Intertek Testing: Third party Test Report of Lamps dated 22/05/2012 5. NTEK Testing Technology: Certificate of LVD Compliance dated 29/02/2012 6. NTEK Testing Technology: Third party Test Report of Lamps dated 29/02/2012
/14/	The Lumina Project: From Carbon to Light 09/04/2010
/15/	Regent Climate Connect Knowledge Solution Private Ltd: Implementation Plan
/16/	1. Nokero International Limited: Invoice for LED lamps dated 02/08/2012 2. Proof of Payment dated 01/10/2012
/17/	Nokero International Limited: Manufacturer's Certificate
/18/	Eureka Forbes Limited: Sample Warranty Card
/19/	Eureka Forbes Ltd: Implementation Plan
/20/	International Journal of Environmental Science and Development: Impact of Solar Energy in Rural Development in India 08/2012
/21/	Utrecht University: Appropriate modern lighting systems for off-grid India:

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	Identification of important enablers and inhibitors for a successful off-grid modern lighting project
/22/	Local Stakeholder Consultation: <ol style="list-style-type: none"> 1. Eureka Forbes Limited: Pamphlets for Local Stakeholder Consultation in Hindi and Kannada(local language) for local stakeholder consultation on 17/12/2011 2. Eureka Forbes Limited: Letter of Invitation for local stakeholder consultation to village head in Karnataka dated 21/11/2011 3. Eureka Forbes Limited: Letter of Invitation for local stakeholder consultation at Mass Institute of Rural Development, Warangal, Andhra Pradesh dated 21/11/2011 4. Eureka Forbes Limited: Letter of Invitation for local stakeholder consultation at Kannur, Kerala dated 21/11/2011 5. Eureka Forbes Limited: Letter of Invitation for local stakeholder consultation at Dharmapuri, Tamil Nadu dated 21/11/2011
/23/	<ol style="list-style-type: none"> 1. Agreement for CPA participation dated 14/02/2012 2. Amendments to the CPA agreement letter confirming new CME, dated 18/06/2012

Background investigation and other referred documents/websites:

/B01/	CDM Validation and Verification Manual, version 01.2, EB 55 (Annex 1)
/B02/	AMS-III.AR. Substituting fossil fuel based lighting with LED lighting systems, version 03.0, EB 68 (Annex 20)
/B03/	General Guidelines for SSC CDM methodologies, version 19.0, EB 69 (Annex 27)
/B04/	PoA Specific guidelines / standards published by UNFCCC: <ol style="list-style-type: none"> 1. CDM programme of activities design document form (CDM-SSC-PoA-DD) Version 01, EB 33 2. CDM programme activity design document form (CDM-SSC-CPA-DD) Version 01, EB 33 3. Procedures for registration of a programme of activities as a single CDM project activity and issuance of certified emission Reductions for a programme of activities, Version 04.1, EB 55 (Annex 38) 4. Procedures for review of erroneous inclusion of a CPA, version 03, EB 61 (Annex 22) 5. Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities, version 01, EB 65 (Annex 03) 6. Guidelines on demonstration and prior consideration of CDM”, version 04, EB 62 (Annex 13) 7. Standard for sampling and surveys for CDM Project Activities and PoAs, version 03.0, EB 69 (Annex 4) 8. Guidelines for sampling and surveys for CDM project activities and programme of activities, version 02.0 EB 69 (Annex 5) 9. Guidelines on assessment of de-bundling for SSC project activities, Version 03, EB 54 (Annex 13) 10. Guidelines on the demonstration of additionality of small-scale project activities, version 09.0, EB 68 (Annex 27) 11. Procedures for modalities of communication between project participants and the executive board, version 01, EB 45 Annex 59
/B05/	Glossary of CDM terms, version 07, EB 70 (Annex 7)
/B06/	Websites: <ol style="list-style-type: none"> 1. www.unfccc.int 2. http://www.cdmpipeline.org/ 3. http://www.uneprioe.org/default.aspx 4. http://www.google.com/earth/index.html 5. http://maps.google.com 6. http://india.gov.in/knowindia/profile.php 7. http://www.ijesd.org/papers/242-B10021.pdf

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8.	http://www1.ifc.org/wps/wcm/connect/a68a120048fd175eb8dc849537832d/SolarLightingBasePyramid.pdf?MOD=AJPERES
9.	http://light.lbl.gov/pubs/tr/lumina-tr5.pdf
10.	http://moef.nic.in/downloads/about-the-ministry/introduction-psap.pdf
11.	http://cdmindia.gov.in/approval_process.php
12.	http://presscouncil.nic.in/speechpdf/Print%20communication%20in%20Rural%20India20.2.pdf
13.	http://moef.nic.in/divisions/iass/notif/eia.htm
14.	http://envfor.nic.in/legis/eia/so1533.pdf
15.	http://www.cpcb.nic.in/latest/27.06.08%20guidelines%20for%20E-Waste.pdf
16.	http://moef.nic.in/downloads/rules-and-regulations/1035e_eng.pdf
17.	http://igitur-archive.library.uu.nl/student-theses/2012-1029-200456/Master%20Thesis%20David%20van%20Eekhout.pdf
18.	http://www.mapsofindia.com/

The changes between the CPA-DD version 01 (real case), published for the 30 days stakeholder commenting period /01/ and the final version submitted for registration /02/ are addressed in the table 2 of the validation protocol as a part of this report.

The main changes between the CPA-DD, version 01 /01/ published for the 30 days stakeholder commenting period and the final version /02/ submitted for registration are presented in the below table as follows:

Topic	CPA-DD – GSC/01/	Final CPA-DD/02/	Assessment
PoA title	“CarbonSoft Open Source PoA, LED Lighting Distribution: Emerging Markets”	“CarbonSoft Open Source PoA, LED Lighting Distribution: Emerging Markets”	No Change
CPA title	CarbonSoft Emerging Markets CPA01	CarbonSoft Emerging Markets CPA01	No Change. No version was provided for the webhosted version of CPA-DD/01/. CAR 1 was raised in this regard and has been addressed and therefore closed.
CPA Implementer	Eureka Forbes Ltd	Eureka Forbes Ltd	The name of CPA implementer has been changed. CL 3 was raised in this regard and has been addressed and therefore closed.
Scope	1: Energy industries (renewable - / non-renewable sources)	1: Energy industries (renewable - / non-renewable sources)	No change
Methodology / Activity	AMS-III.AR (Version 1) / Small scale	AMS-III.AR (Version 3) / Small scale	No change
Amount of emission reductions (tCO ₂)	205,250	27,777	The difference between amount of emission reduction in CPA-DD - GSC/01/ (205,250) and Final CPA-DD/02/ (27,777) is caused because the value FUR and DB _y has been changed.

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			Conservative default values are used for the parameters. CL6 was raised in this regard and has been closed. Also, the CER calculation was done with 60,000 lamps to be distributed per year. Later on it was changed to the lamps distributed as per implementation plan /19/. The number of lamps distributed was reduced in the Implementation plan.
Real case CPA starting Date	20/12/2011	02/08/2012	Starting date has been changed to 02/08/2012. This date is based on the date of invoice for the LED lamps/16-1/. CAR 4 was raised in this regard and has been addressed and closed.
CPA Location	The CPA will operate across four of the states of India: 1) Karnataka 2) Kerala 3) Andhra Pradesh 4) Tamil Nadu Latitude: NA Longitude: NA	The CPA will operate across four of the states of India: 1) Karnataka Latitude: 15° 00' N Longitude: 75° 00' E 2) Kerala Latitude: 10° 00' N Longitude: 76° 25' E 3) Andhra Pradesh Latitude: 16° 00' N Longitude: 80° 00' E 4) Tamil Nadu Latitude: 11° 00' N Longitude: 78° 00' E	Details of CPA location have been changed with geographical reference of the location. Geographical references have been verified with the website reference/B06-18/. CAR 2 was raised in this regard and has been resolved.

2.2 Follow-up actions

In order to reach to a Validation Opinion a site visit along with an interview was conducted on 27/11/2011. An interview was also conducted on 03/09/2012 with the representative of new CME due to the change of CME. This is in conformity with §33 (b) of Validation and Verification Manual, version 1.2/B01/. Prior to the interview salient points to be discussed were planned. Date of interview, interviewee and points discussed are given in the following table.

	Date	Name and Role	Organization	Topic
/a/	27/11/2011	T Goutham Reddy	Eureka Forbes Representative	Distribution & Implementation Framework, Operation & management, Monitoring

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/b/	27/11/2011	Omair B. Nayyar	CarbonSoft Corporation Ltd.	Project concept and Design PoA-DD & CPA-DD Discussion, Baseline, additionality, monitoring and emission reduction calculation
/c/	27/11/2011	S Balakrishnan	Vrutti Livelihoods Resource Centre	Distribution & Implementation Framework, Operation & management, Monitoring
/d/	27/11/2011	Prashanth U. K.	Advait Inc (Distributor)	Distribution & Implementation Framework, Operation & management, Monitoring
/e/	03/09/2012	Nitin Tanwar	Director, Regent Climate Connect Knowledge Solution Private Ltd	CME Management Structure, Distribution & Implementation Framework, Project Design

Cross checks were made with the information provided in PoA-DD /03/ and the information provided by interviewed personnel. Validation Team considered the views obtained in these interviews while arriving at Validation Opinion.

2.3 Resolution of outstanding issues

The objective of this phase of the validation is to resolve any outstanding issues, which need to be clarified prior to Carbon Check's conclusion on the CPA design. In order to ensure transparency a validation protocol is customised for the programme. The protocol shows in transparent manner criteria (requirements), means of verification and the results from validating the identified criteria. The validation protocol serves the following purposes:

- It organises, details and clarifies the requirements a CPA is expected to meet;
- It ensures a transparent validation process where the validator will document how a particular requirement has been validated and the result of the validation.

The completed validation protocol for the CPA "CarbonSoft Emerging Markets CPA01" is enclosed in Appendix A to this report.

Findings established during the validation could either be seen as a non-fulfilment of CDM criteria or where a risk to the fulfilment of programme objectives is identified. Corrective action requests (CAR) are issued, where:

- (i) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;
- (ii) The CDM requirements have not been met;
- (iii) There is a risk that emission reductions cannot be monitored or calculated.

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

A forward action request (FAR) may be raised during validation to highlight issues related to project implementation that require review during the first verification of the project activity.

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Figure 1 Validation protocol tables

Validation Protocol, Table 1 - Requirement checklist					
Checklist Question	Ref.	MoV	Comments	Draft Conclusion	Final Conclusion
The various requirements in Table 1 are linked to checklist questions the project should meet. The checklist is organized in seven different sections.	Makes reference to documents where the answer to the checklist question or item is found.	Explain how conformance with the checklist question is investigated. Examples are document review (DR), interview or any other follow-up actions (I), cross checking (CC) with available information relating to projects, (N/A) means not applicable.	The discussion on how the conclusion is arrived at and the conclusion on the compliance with checklist question so far.	OK is used if the information and evidence provided is adequate to demonstrate compliance with CDM requirements. For CAR, CL and FAR see the definitions above.	OK is used if the information and evidence provided is adequate to demonstrate compliance with CDM requirements.

Validation Protocol, Table 2 - Resolution of Corrective Action Requests and Clarification			
Corrective action requests and/or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
The CAR and/or CLs raised in table 1 are repeated here.	Reference to the checklist question number in Table 1 where the CAR or CL is explained.	The responses given by the project participants to address the CARs and/or CLs.	The validation team's assessment and final conclusion of the CARs and/or CLs.

Validation Protocol, Table 3 - Forward Action Requests			
Forward action request	Reference to Table 2	Response by project participants	Validation Conclusion
The FAR raised in table 1 is repeated here.	Reference to the checklist question number in Table 1 where the FAR is explained.	Response by the project participants on how forward action request will be addressed prior to first verification.	

2.4 Internal quality control

Before the assessment begins, members of the team covering the technical area(s), sectoral scope(s) and relevant host country experience for evaluating the CDM PoA/CPA are appointed. The validation report including the validation findings underwent a technical review. A technical reviewer qualified in accordance with Carbon Check's qualification scheme for CDM validation and verification performed the technical review.

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2.5 Validation team and the technical reviewer(s)

The validation team and the technical reviewers consist of the following personnel:

Validation Team		Type of Involvement						
Full Name	Appointed for Sectoral scopes (Technical Areas)	Supervision of work	Desk review	Site visit & Interview	Report & protocol writing	Technical Expert Input	Reporting support	Technical Reviewer
Ravi Shankar	1.2, 2.1, 2.2, 3.1, 13.1		X	X		X		
Amit Anand	1.2, 13.1	X	X	X		X	X	
Anubhav Dimri	1.2		X		X	X	X	
Vikash Kumar Singh	1.2, 3.1, 13.1							X

3 VALIDATION SUMMARY

Under the validation by means of document review and on-site interviews with stakeholders, the validation team considers that the CPA description in CPA titled "CarbonSoft Emerging Markets CPA01", as described in the CDM-SSC-CPA-DD of date 26/11/2012, version 05 /02/ is accurate and complete; meets the requirements to be included in the PoA titled "CarbonSoft Open Source PoA, LED Lighting Distribution: Emerging Markets" and correctly applies the baseline and monitoring methodology AMS-III.AR, version 03 /B02/.

During the course of validation a total of 10 (Ten) Corrective Action Requests (CARs) and 10 (Ten) Clarification Requests (CLs) were identified on webhosted CPA-DD/01/ (without version number and dated 20/12/2011). Upon evaluation of responses provided by the Project Participant (CPA implementer) all the identified issues were closed successfully. One (01) Forward Action Request (FAR) has been raised during course of validation.

The issues raised, PP response and the assessment by validation team are included in Table 2 and Table 3 of Appendix A of validation protocol.

3.1 CPA Design Document

The CPA-DD is compliant with relevant form and guidance as provided by the CPA-DD template /06/ /B04-2/ for the POA and UNFCCC requirements under the PoA.

CCL considers that the guidelines for the completion of the CPA documents in their most recent version have been followed. The Managing Entity and the CPA Implementer/s provided relevant information in the applicable CPA-DD sections.

3.2 CPA Description

The following description of the proposed CDM programme activity as per CPA-DD /02/ was verified:

The CPA is developed under the small-scale Programme of Activities (PoA) entitled "CarbonSoft Open Source PoA, LED lighting distribution: Emerging Markets". The programme will reduce greenhouse gas (GHG) emissions by replacing existing and predominant use of kerosene-based lighting with installation of purpose-designed, renewable energy-charged LED lamps in India. The main aim of CPA is to reduce greenhouse gas (GHG) emissions by replacing fossil fuel based lighting applications with installation of solar based LED lamps. CAR 2 and CL 2 were raised in this regard and have been addressed and therefore closed. The CPA is located in southern region of India, host country. The

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PoA aims to support sustainable development in the host country, India. The coordinating/management entity (CME) of this PoA is “Regent Climate Connect Knowledge Solution Private Ltd”.

The proposed small scale CDM Programme activity “CarbonSoft Emerging Markets CPA01” (hereafter referred to as the “The CPA”) is developed by “Eureka Forbes Ltd”, (hereafter referred to as “CPA implementer”). The CPA involves reduction of greenhouse gases through the replacement of the lighting systems traditionally fuelled from kerosene by solar LED lamps.

The CPA is located in southern region of India, in following states:

State	Latitude	Longitude
Karnataka	15° 00' N	75° 00' E
Kerala	10° 00' N	76° 25' E
Andhra Pradesh	16° 00' N	80° 00' E
Tamilnadu	11° 00' N	78° 00' E

The CPA geo-coordinates have been verified against the publically available geo-coordinates/B06-6/. CAR 3 and CL 4 were raised in this regard and have been addressed and therefore closed.

The target group for CPA includes distribute the project lamps to residential and/or non-residential households or communities or Small and Medium Enterprises/02/. The baseline scenario is based on the literature available on fuel availability in the target area, like From Carbon to Light/14/. A large number of households in India are un-electrified/20/. Based on this study, it is found that the monthly expenditure on lighting reduces substantially after installation of Solar Home Lighting Systems/20/. In India, about 579 million people, is living without access to electricity/20/. It is estimated that more than 67.6 million Indian households still are dependent on 1 or 2 kerosene lanterns for lighting. The annual usage per household is 43.8 litres when assuming a usage of 0.03 litre per hour and 4 hours per day/21//B06-17/. Hence, it is justified that usage of kerosene for lighting applications is a common practice in India. Fuel subsidies for kerosene are relatively high in India and that would present significant barrier to the uptake of new lighting technologies/14/.

The CPA under consideration includes project lamps of the type Option 1 as per § 11 of the methodology AMS-III.AR, version 03/B02/. The verified technical details of the project lamp distributed in CPA are described below:

Parameter	Characteristics/Value
Lamp Type	Solar PV (4 LEDs)/17/
Lamp wattage (in watts)	0.25 W /17/
Luminous flux output (in lumens)	25.71 lumens/13-2/ /17/
Type and rated capacity of the renewable energy equipment used for battery-charging (in Watts)	0.23, Solar /17/
Type and rated capacity of the batteries	3 X 3.2V 400mAh AA Lithium rechargeable battery (LiFe) /13-2/ /17/
Type of charge controller	Active charge controller /17/
Autonomous time	5.76 hours/13-2/ /17/
DBT	3.5 hours /17/
Solar Run Times(s) (SRT)	4.47 hours/13-3/ /17/
Where applicable, the amount of time to fully charge the product using mechanical means or a centralized charging system (e.g. the national grid) and DBT	NA
Physical protection against environmental factors (e.g. rain, heat, insect ingress)	In accordance with the testing requirements of paragraph 12 c (ii) of the applied methodology AMS-III.AR, version 03/B03/ the project lamps have been tested and confirmed to meet IP class 43. /13-6/ /17/

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CAR 7 was raised with regards to the technical design specifications of the project lamps and has been addressed and therefore successfully closed.

The implementation framework of the PoA involves direct selling and indirect selling. Project lamps will be distributed through in-country distribution companies, or through other, independent distribution partners. Partners will be responsible for the implementation of one or more CPAs. The two types of selling mechanisms used in the PoA are described below:

1. Direct Selling

The CPA Implementer can distribute project lamps directly to consumer from a fixed location.

2. Indirect Selling

The CPA Implementer can distribute project lamps by a manufacturer to a service merchandiser or other wholesaler, who in turn sells the products to chain store companies or independent stores and then to end user/consumer.

The implementation schedule of the CPA indicates that the project lamps shall be distributed in a phase-wise manner. The implementation schedule indicated in CPA-DD/02/ is:

Year	Number of project lamps to be distributed
2012	14,000
2013	24,000
2014	24,000
2015	24,000
2016	24,000
2017	24,000
2018	24,000
2019	24,000

CL 1 was raised with regards to the implementation plan and has been addressed and therefore closed. The distribution structure and implementation schedule presented is in line with the CME manual/09/. Each project lamp shall be identified by the unique number of the CPA/04/. CL 8 was raised in this regard and has been addressed. Records of the sales data would be collected by the CPA implementer and will maintain the electronic records for 2 years following the completion of the CPA. The CME shall store consolidated data in the form of electronic records for 2 years following the completion of the CPA/02/.

Project lamps shall have a warranty of minimum one year upon delivery to the end user/02//18/. The project lamps shall have a rated average life of atleast 5,000 hours /17/. These values have been certified by the manufacturer.

The start date of the CPA is 02/08/2012, it is based on the date of invoice/16-1/, and is deemed real action of the CPA as per CDM Glossary of terms/B05/. This is the date when CPA implementer has ordered for the LED lamps from the manufacturer /16-1/. Proof of payment has also been provided to confirm the same/16-2/. The starting date of the CPA, 02/08/2012 is after the first publication for global stakeholder consultation. i.e. 20/12/2011. CAR 4 was raised in this regard and has been addressed and therefore successful closed.

The operational lifetime of the CPA is stated as 7 years /02/. This value has been provided as the operational lifetime of each project lamp shall be 2 years and the lamps being distributed in a phase-wise manner shall ensure the operational lifetime of CPA to be 7 years. Each lamp shall be monitored accordingly such that at the expiration of its useful life it shall be removed from the calculation of CERs this particularly applies for Option 1 project lamps with a two year useful life. CAR 5 was raised in this regard and has been addressed and therefore successfully closed.

As stated in CPA-DD/02/, in the CPA, the total emission reduction is accounted to a difference of Baseline emissions and Project Emissions. Baseline emissions can be accounted to the CO₂ emissions from traditional fuel based lighting systems. Leakage emissions are not accounted in the small-scale methodology and in the CPA. Project emissions are also taken as zero as the lamp

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charging mechanism in the PoA involves charging by renewable energy system, i.e. Solar charged LED lamps. So, total emission reduction is due to elimination of baseline emissions.

Each isolated unit will generate an estimated ex-ante emission reduction of 0.092 tCO₂e /02/. The CPA is expected to result in an average annual emission reduction of 3968 tCO₂e /02/, for renewable crediting period of 7 years /02/. The start date of crediting period of the CPA as per the CPA-DD /02/ is 01/02/2012. Moreover, the expected starting date of crediting period for the CPA is in-line with the provisions provided under g-CPA-DD template/06/. As this is a small-scale CPA, the maximum number of emission reductions for a year shall be limited to 60,000 tCO₂e.

The CPA has not received and will not be seeking public funding from Annex 1 countries; hence no official development assistance (ODA) will be diverted from any funding from Annex 1 parties/12/. CME has also provided a declaration that no ODA is involved in the PoA/08/. CL 7 was raised in this regard and has been addressed.

The validation team has assessed from UNFCCC website /B06-1/ and on-site interviews /a/ /b/ /e/ that there is no other similar PoA or CDM project occurring in the CPA area and the CPA is neither registered as an individual CDM project activity or is part of another Registered PoA. This is also substantiated by the declaration provided by the CPA implementer/12/.

The information presented in the CPA documents is consistent with the actual planning and implementation of the activity confirmed in the following ways:

- A review and cross check of data and information.
- During site visit, via interviews of relevant stakeholder and personnel with project specific knowledge. In case of doubt, further cross checks through additional interviews were conducted.
- A review of information related to similar projects or technologies, which have been used if available to validate the accuracy and completeness of the project description.

In conclusion, CCL confirms that the CPA project description is sufficiently accurate and complete in order to comply with the requirements of the PoA.

3.2.1 CPA Boundary

The CPA boundary was assessed considering information gathered from the physical site inspection, interviews and secondary evidence received on the design of the CPA. CAR 6 was raised in this regard and has been addressed.

Validation team 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 in a clear manner as detailed below:

A) For the purpose of determining project activity emissions, each CPA includes:

- There are no project emissions for the CPA

B) For the purpose of determining baseline emissions, each CPA includes the following emissions sources:

- CO₂ emissions generated from the combustion of kerosene fossil fuel

C) The spatial extent of each CPA comprises:

In accordance with the methodology AMS-III.AR (Version 3.0.0)/B02/ the spatial extent of CPA boundary is:

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- The project boundary includes the solar panel, the connector to the LED lamp and the LED lamp. The kit, comprising of the solar panel, the connector and LED lamp, constitutes the boundary.

Validation team based on the above confirms that the project boundary as documented in the PoA-DD/03/ is justified for the future CPAs of the PoA and is fully in line with the requirements set by the applied methodology /B02/.

Validation team has checked the geographical boundary, geo-coordinates and the map provided for the CPA from the CPA-DD and the interview and observation during the site visit. Validation team confirms that the CPA is within the geographical boundary of PoA, i.e. India. The review of CPA-DD /02/ reveals the geo-coordinates of the states where the CPA 1 would be implemented:

1) Karnataka

Latitude: 15° 00' N

Longitude: 75° 00' E

2) Kerala

Latitude: 10° 00' N

Longitude: 76° 25' E

3) Andhra Pradesh

Latitude: 16° 00' N

Longitude: 80° 00' E

4) Tamil Nadu

Latitude: 11° 00' N

Longitude: 78° 00' E

The sources and gases within the boundary have been considered in a clear manner.

3.3 Eligibility Criteria for CPA Inclusion

Review of PoA DD /02/, g-CPA DD template /06/ and on-site interview with representatives of CME reveals that the CME of the PoA employs clear and unambiguous criteria for the inclusion of the CPAs. The eligibility criteria have been stated and validation team confirms the eligibility criteria are in line with requirement of § 14, annex 3 of EB 65 /B04/. CAR 4 was raised in this regard and is successfully closed. Additionality and applicability of the applied methodology are the eligibility criteria as per the PoA DD, which is deemed appropriate and acceptable to the validation team. The eligibility criteria can be checked at the CPA level by the CME and shall be confirmed by the DOE before inclusion of the CPAs in the PoA. CAR 8 was raised in this regard and has been addressed. The subject CPA meets all eligibility criteria of the PoA as assessed below:

Sl. No	Eligibility Criteria as stated in section B.2 of the CPA-DD /02/ and section A.4.2.2 of the PoA-DD/04/	Status marked in CPA-DD /02/	Assessment by the validation team
1.	The CPA shall be located within the geographical boundaries of the India. The following documents shall be provided: • GPS co-ordinates of project activity within CPA	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Through the validation of geographical coordinates and CPA boundary provided in the CPA-DD/02/, it was confirmed that CPA lies within the geographic boundary of the PoA, i.e within geographical boundary of India. Conclusion: Based on the above assessment, validation team concludes that the CPA complies with this eligibility criterion of the PoA.
2.	(a) Project lamps distributed by the CPA shall be	<input checked="" type="checkbox"/> Yes	As the project is being implemented by the CME a valid confirmation has

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	<p>marked with unique identification of the CPA. (b) The CPA has not yet been included in another Programme of Activities or has not yet been registered as a single CDM Project activity.</p> <p>The following documents shall be provided:</p> <ul style="list-style-type: none"> Project lamps distributed shall have a CPA code marked on their casing or on project lamp to uniquely identify the project lamp with the PoA and with the CPA. The numbering system or each CPA shall be 'CS [CPA number]' The CPA Implementing entity shall signed a contract with CME confirming the "Inclusion of the contracted CPA in the PoA & CPA access. Self-declaration from the CME that "The CPA has not yet been included in another Programme of Activities or has not yet been registered as a single CDM Project activity." 	<p><input type="checkbox"/> No</p>	<p>been provided in the CPA-DD that the project lamps included in this CPA have not been included or credited in any other CDM or voluntary carbon financing programmes. A unique ID for the CPA is provided (CS_EM001). Each project lamp in the CPA shall be marked by this unique ID. To avoid double counting, CPA implementer has also provided a declaration that "Neither the CPA has been included in another PoA nor it has applied for registration as single CDM project activity"/12/. Validation team based on review of the CPA-DD/02/, declaration/12/ and the unique ID confirms that the CPA is neither registered as an individual CDM project nor included under another registered PoA.</p> <p>Conclusion: Based on the above assessment, validation team concludes that this eligibility criteria of the PoA is complied by the subject CPA.</p>
<p>3.</p>	<p>This programme is specifically for the renewable energy system battery-charged LED based lamps. There exists various types of lamps, and these all are valid under this programme as long as the project lamps comply with standards as mentioned in the methodology AMS-III.AR. (Version 03.0).</p> <p>Each CPA will submit documentation/certifications to the CME in this regard and the CME will record and store the information for validation and monitoring purpose.</p> <p>Documents shall include:</p> <ul style="list-style-type: none"> Certificates from Manufacturer or; 	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Validation team based on the documents submitted:</p> <ul style="list-style-type: none"> Certificates from Manufacturer /17/ Certificates from 3rd Party accredited laboratory/13/ <p>Confirms that the lamps are charged by solar PV panels.</p> <p>Conclusion: Based on the above assessment, validation team concludes that this eligibility criteria of the PoA is complied by the subject CPA.</p>

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	<ul style="list-style-type: none"> • Certificates from 3rd Party accredited laboratory 		
4.	<p>For the purpose of this PoA, the start date of the CPA will be when the CPA operator places the first order for lamps.</p> <p>The start date shall be after the date of GSC .i.e.,23/12/2011.</p> <p>The CPA operator will provide documentary proof (like Sales documentation such as invoices, receipts or warranty cards) that the order was placed for the project lamps to the CME and the CME will record the start date of the CPA and confirm that a document check has been done.</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>Based on the start date of the CPA provided in CPA-DD 02/08/2012 /02/ and the invoice for LED lamps/16-1/ confirms that the start date of the CPA is 02/08/2012. Hence, it is confirmed that the start date of the CPA is not prior to the commencement of validation of the programme of activities.</p> <p>Conclusion: Based on the above assessment, validation team concludes that this eligibility criteria of the PoA is complied by the subject CPA.</p>
5.	<p>CPA shall meet the applicability conditions and other requirements of AMS-III.AR. (Version 03.0).</p> <p>The CPA operator shall provide all the information with proper supporting documents and proofs as described in section E.2 of the PoA.</p> <p>The following documents shall be provided:</p> <ul style="list-style-type: none"> • Declaration from CME that CPA meets the applicability criteria. • Technical specification from the manufacturer of the Solar LED / CFL lamps • Certificates from Manufacturer or; • Certificates from 3rd Party accredited laboratory 	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>Validation team based on review of following documents:</p> <ul style="list-style-type: none"> • Declaration from CME that CPA meets the applicability criteria. /12-5/. • Technical specifications and Certificate from the manufacturer of the solar LED lamps/17/ • Certificate from 3rd Party accredited laboratory/13/ • Sample warranty card/18/. <p>The validation team confirms that the CPA meets the applicability conditions and other requirements of AMS-III.AR. (Version 03.0)/B02/.</p> <p>The replaced lamps are those that directly consume fossil fuel. This is proved by the baseline literature that the usage of kerosene as a fossil fuel is a common practice in the PoA and CPA boundary/21//B06-17/.</p> <p>The project lamps satisfy conditions of §2(a) of the methodology, AMS-III.AR, version 03/B02/. Project Lamps distributed under this CPA use rechargeable batteries charged by renewable energy systems i.e. photovoltaic systems/17/.</p> <p>CPA has opted for Option 1 of the § 11 of the methodology, AMS-III.AR, version 03/B02/ and have average life of at least 5,000 hours. This is evidenced by the manufacturer's certificate/17/.</p>

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		<p>Warranty of minimum one year has been provided to the end users from the date of sale. Sample warranty card has been provided as an evidence/18/.</p> <p>Performance characteristics of the project lamps are proven by the third party test results/13/ and manufacturer's certificate/17/.</p> <p>Project description has been provided in section A.2 of CPA-DD/02/, detailing that the replaced lamps are those that use fossil fuel, kerosene. Usage of kerosene for lighting applications is a common practice in India as evidenced by the baseline literature/21/ /B06-17/.</p> <p>Validation team based on the description provided in CPA-DD/02/, confirms that each CPA shall be identified by a unique ID, and each project lamp shall be marked by the unique ID, hence will avoid double counting of the project lamps.</p> <p>The prevailing regulations related to disposal of batteries are e-waste rules/B06-15/ /B06-16/ and according to regulations proper disposal is ensured by the CPA by setting up guidelines for disposal of batteries in CPA-DD/02/.</p> <p>CPA-DD/02/ provides details of the technical design specifications and meet the requirement of § 7 of the methodology, AMS-III.AR, version 03/B02/. This details are compared against manufacturer's certificate/17/ and third party test results/13/ and are found to be correct.</p> <p>As per CPA-DD, CPA implementer shall restrict the sales of project lamps to 5 for each household/SME/communities. Only the first 5 lamps shall be eligible to earn CERs. A record of all surplus sales shall be kept and the total number of surplus lamps distributed shall be deducted from the final sales data prepared for verification. This shall be confirmed during verification and FAR 1 has been raised in this regard.</p> <p>The CPA under consideration has</p>
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			<p>annual average emission reductions at 3,968 tCO₂e, this has been confirmed through the description in CPA-DD/02/ and ER sheet/11/ and thus meets the requirements if § 9 of the methodology, AMS-III.AR, version 03/B02/.</p> <p>As the project lamps under consideration are Option 1 as per § 11 of the methodology, AMS-III.AR, version 03/B02/, hence no monitoring of project lamps is required as per §24 and §25 of the methodology, AMS-III.AR, version 03/B02/. These conditions are to be met only for Option 2 as per § 12 of the methodology, AMS-III.AR, version 03/B02/</p> <p>Conclusion: Based on the above assessment, validation team concludes that this eligibility criteria of the PoA is complied by the subject CPA.</p>
6.	<p>CPA shall demonstrate additionality as per Annex 27 of EB 68 (version 09.0).</p> <p>The following documents shall be provided to prove additionality::</p> <ul style="list-style-type: none"> • Technical specification from the manufacturer of the Solar LED / CFL lamps • Lamp sales/distribution records or distribution plan. • Emission reduction sheet <p>Additionality will be proven at CPA level.</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>Validation team based on review of following documents:</p> <ul style="list-style-type: none"> • Technical specifications from the manufacturer and manufacturer's certificate/17/. • Implementation Plan for CPA implementer/19/. • Emission reduction calculation sheet/11/ <p>confirms that the CPA meets the requirements of demonstrating additionality.</p> <p>Based on technical specifications/17/, it can be concluded that the project lamp is an isolated unit. Implementation plan/19/ provides that the lamp would be distributed to households or communities or Small and Medium Enterprises (SMEs) and they will be the end users of the project lamps. Emission reduction sheet/11/ confirms that 0.092 tCO₂e would be reduced for each lamp and this is much less than the threshold of 600 tCO₂e.</p> <p>Conclusion: Based on the above assessment, validation team concludes that this eligibility criteria of the PoA is complied by the subject CPA.</p>
7.	For CPA under this PoA	<input checked="" type="checkbox"/> Yes	Validation team based on review of

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	<p>environmental impact assessment shall be carried out in line with applicable host country regulations.</p> <p>The following documents shall be provided:</p> <ul style="list-style-type: none"> Environmental analysis carried out in line with local environmental laws and detailed in section C of the CPA-DD. 	<input type="checkbox"/> No	<p>the environment analysis in the proposed CPA in CPA-DD/02/ and confirms that the environmental analysis has been carried out in line with applicable host country regulations. Relevant environment rules in this regard are e-waste rules/B06-16/.</p> <p>Conclusion: Based on the above assessment, validation team concludes that this eligibility criteria of the PoA is complied by the subject CPA.</p>
8.	<p>Local stakeholder consultations will be required and conducted at CPA level.</p> <p>LSC will be conducted at CPA level and following documents shall be provided:</p> <ul style="list-style-type: none"> Attendance list Minutes of meetings 	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>Validation team based on the review of CPA-DD/02/ and the following documents attached in CPA-DD/02/ :</p> <ul style="list-style-type: none"> Attendance list Minutes of Meeting; <p>The validation team confirms that the conditions related to local stakeholder consultation are met by CPA.</p> <p>Conclusion: Based on the above assessment, validation team concludes that the CPA complies with eligibility criterion of the PoA.</p>
9.	<p>No official Development Aid shall be involved or diverted as a result of any activities in the CPA under the PoA.</p> <p>The following documents shall be provided:</p> <ul style="list-style-type: none"> Declaration on non-involvement of ODA in PoA by CME Declaration on non-involvement of ODA in CPA by CPA implementer. 	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>Validation based on review of CPA-DD/02/ and the declaration provided by the CPA implementer that no ODA/12/ has been used in the CPA confirms that there is no ODA involved or diverted in the CPA. This is also confirmed by the declaration by the CME that no ODA/08/ is involved or diverted in the CPA.</p> <p>Conclusion: Based on the above assessment, validation team concludes that the CPA complies with eligibility criterion of the PoA.</p>
10.	<p>For CPA types Where applicable, target group shall be identified in accordance with § 2 (c) of Annex 27,EB 68 (version 09.0).</p> <p>The following documents shall be provided:</p> <ul style="list-style-type: none"> Business plan and distribution model. Lamp sales/distribution records, if available. 	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>Validation team reviewed the description of distribution plan and target group identified in CPA-DD/02/ and the implementation business plan confirms that target group is clearly provided.</p> <p>Conclusion: Based on the above assessment, validation team concludes that this eligibility criteria of the PoA is complied by the subject CPA.</p>
11.	<p>For CPA sampling requirements shall be assessed and carried out in line with</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>Validation team based on review of the CPA-DD confirms that the sampling is not required for the</p>

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	<p>requirements of Annex 4 & 5 of EB 69.</p> <p>If CPA shall chose for Option 2, paragraph 12, of the methodology, wherein the lamps used will be able to generate CERs for a period of seven years, sampling will be required for the monitoring. The following documents shall be provided:</p> <ul style="list-style-type: none"> • Sampling plan (more specifically the sampling design) • A sampling plan detailed in section B.6.1 of the CPA-DD • CME manual confirming that CPA implementer will abide by the requirements set forth by CME for the CPAs under this PoA. 		<p>CPA, as the CPA implementer has opted for Option1, paragraph 1 of the methodology AMS-III.AR, version 03/B02/.</p> <p>Conclusion: Based on the above assessment, validation team concludes that this eligibility criteria of the PoA is complied by the subject CPA.</p>
12.	<p>For CPAs under this PoA types Where applicable, the conditions that ensure that the aggregate of the CPA meets the small-scale or micro-scale threshold criteria and remains within those thresholds throughout the crediting period of the CPA shall be assessed in accordance with either Annex 26 of EB 68 (version 04.0) for micro-scale threshold or CMP.2, § 28 for small-scale thresholds.</p> <p>The following documents shall be provided:</p> <ul style="list-style-type: none"> • Emission reduction sheet 	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>Validation team based on review of number of CERs generated in a year from CPA-DD/02/ and ER sheet/11/ confirms that they are less than 60 kilo tonnes of CER in a year. The CPA complies with the conditions of small scale limit.</p> <p>Conclusion: Based on the above assessment, validation team concludes that this eligibility criteria of the PoA is complied by the subject CPA.</p>
13.	<p>For CPAs under this PoA debundling checks shall be performed in line with EB 54 Annex 13.</p> <p>The following documents shall be provided:</p> <ul style="list-style-type: none"> • Declaration from the CME • Declaration from the CPA implementer • A detailed description of debundling check in section A.4.6 of CPA-DD • Emission reduction sheet with calculations for debundling limits 	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>Validation team based on review of the CER sheet/11/, declaration provided by the CPA implementer/12/ and the description provided in CPA-DD/02/ confirms that each individual unit is less than 1 % of small scale threshold, and as required by §10 of EB 54 Annex 13 /B12/, exempted from debundling check.</p> <p>Conclusion: Based on the above assessment, validation team concludes that this eligibility criteria of the PoA is complied by the subject CPA.</p>

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According to the requirements of § 17 and § 18 of annex 3 of EB 65 /B04-5/, the validation team by means of onsite visit interview and through document review /09/ confirms that the CME is competent to check the features of the CPA. The CME system manual /09/ clearly mentions the roles, responsibilities and authorities within the managing entity. The validation team has also confirmed through document review and on site visit interviews the procedures to avoid double counting /09/, training and capacity development for personnel, records and documentation control process, measures for continual improvements of the PoA management /09/.

In conclusion, CCL confirms that the CPA complies with the eligibility criteria requirements of the PoA.

3.4 Additionality

3.4.1 Prior consideration of CDM

As per § 4 of annex 13, EB 62 /B07/, “Guidelines for the demonstration and assessment of prior consideration of the CDM” do not apply to PoAs, as at present it is expected that no component of the programme will commence prior to the start date of validation.

3.4.2 Approach for demonstrating CPA additionality

Key criteria for assessing additionality at CPA level have been explained in section E.5.1, E.5.2 of PoA-DD /04/. Additionality criteria provided in section E.5.1 and E.5.2 are in line with the eligibility criteria for PoA-DD. The additionality was justified in accordance with the requirements derived from AMS-III.AR, version 03, Guidelines on the Demonstration of Additionality of Small-Scale Project Activities, EB 68 Annex 27 (version 09.0) /B04-10/.

The key criteria derived from assessment of additionality in section E.5.1, E.5.2 and A.4.2.2 of PoA-DD /04/ have been put forward as eligibility criteria for inclusion of CPA in PoA. The section E.5.2 of the PoA-DD /04/ clearly demonstrates that CPAs fulfilling these eligibility criteria would be deemed additional. CAR 6 was raised in this regard and is successfully closed.

As per §2 of EB 68 Annex 27 /B04-10/ documentation of barriers is not required for the list of technologies and project activity types that are defined as automatically additional for project sizes up to and including the small-scale CDM thresholds. The project falls under §2(c), “Project activities solely composed of isolated units where the users of the technology/measure are households or communities or Small and Medium Enterprises (SMEs) and where the size of each unit is no larger than 5% of the small-scale CDM thresholds”.

The criteria set out and justification of fulfilment is presented below:

Sl. No.	Eligibility Criteria as stated in section B.2 of the CPA-DD /02/ and section A.4.2.2 of the PoA-DD/04/	Status marked in CPA-DD /02/	Assessment by the validation team
1.	<p>CPA shall demonstrate additionality as per Annex 27 of EB 68 (version 09.0).</p> <p>The following documents shall be provided:</p> <ul style="list-style-type: none">• Technical specification from the manufacturer of the Solar LED / CFL lamps• Lamp sales/distribution records or distribution plan.• Emission reduction sheet <p>Additionality is proven at CPA level.</p>	<p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p>Validation team based on review of following documents:</p> <ul style="list-style-type: none">• Technical specifications from the manufacturer and manufacturer’s certificate/17/.• Implementation Plan for CPA implementer/19/.• Emission reduction calculation sheet/11/ <p>confirms that the CPA meets the requirements of demonstrating additionality.</p>

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			<p>Based on technical specifications/17/, it can be concluded that the project lamp is an isolated unit. Implementation plan/19/ provides that the lamp would be distributed to households or communities or Small and Medium Enterprises (SMEs) and they will be the end users of the project lamps.</p> <p>Emission reduction sheet/11/ confirms that 0.092 tCO₂e would be reduced for each lamp and this is much less than the threshold of 600 tCO₂e.</p> <p>Conclusion: Based on the above assessment, validation team concludes that this eligibility criteria of the PoA is complied by the subject CPA.</p>
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Based on the assessment above the CCL confirms the following:

- The criteria are sufficient to demonstrate additionality of the 1st CPA under this PoA.
- The starting date of the CPA complies with the glossary of terms (version 07)/B05/
- As per the “Guidelines on the Demonstration of Additionality of Small-Scale Project Activities”, version 09, the project is additional.
- All the arguments and parameters in the CPA-DD are well evidenced.
- The baseline scenario is defined in CPA, i.e. the use of baseline lamps which combust fossil fuels to provide lighting services.

3.5 Emission Reduction

3.5.1 Parameters determined ex-ante

The parameters that are determined ex-ante are:

Data/ Parameter	Unit	Value	Source of data	Assessment by validation team
GF _y	Dimensionless	1.0	Default value for charging option defined in paragraph 2(a) of the methodology, AMS-III.AR is used.	Grid Factor in year y has been fixed ex-ante which is in line with the applied methodology AMS-III.AR, version 03 /B02/. The batteries for project lamps are charged by renewable energy system included as part of the project lamp (solar PV).
O	Hours/Day	3.5	Default value as per applied methodology.	Utilization rate has been fixed ex-ante, which is in accordance with the

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				applied methodology AMS-III.AR, version 03. /B03/
U	days/year	365	Default value as per applied methodology.	Annual Utilization has been fixed ex-ante, which is in accordance with the applied methodology AMS-III.AR, version 03. /B03/
EF	kgCO ₂ /litre	2.4	Default value as per applied methodology.	Fuel emissions factor is fixed ex-ante, which is in accordance with the applied methodology AMS-III.AR, version 03. /B03/
LF	Dimensionless	1.0	Default value from the methodology, AMS-III.AR is used.	Leakage factor is fixed ex-ante, which is in accordance with the applied methodology AMS-III.AR, version 03. /B03/
n	Dimensionless	1.0	Default value from the methodology, AMS-III.AR is used.	Number of fuel-based lamps replaced per Project Lamp is fixed ex-ante which is in accordance with the applied methodology AMS-III.AR, version 03. /B03/
FUR	Liters/hour	0.03	Default value from the methodology, AMS-III.AR is used.	Fuel use rate is fixed ex-ante which is in accordance with the applied methodology AMS-III.AR, version 03. /B03/
DV	tCO _{2e}	0.092	Default value from the methodology, AMS-III.AR is used.	Lamp emission factor is fixed ex-ante which is in accordance with the applied methodology AMS-III.AR, version 03. /B03/
DB _y	Dimensionless	1.0	Default value from the methodology, AMS-III.AR is used.	Dynamic baseline factor is fixed ex-ante which is in accordance with the applied methodology AMS-III.AR, version 03. /B03/

CAR 9, CL 6 and CL 10 were raised with regards to the parametric description and values used and have been addressed. In summary, the parameters determined ex-ante have been presented correctly according to requirements.

3.5.2 Emission reduction calculation

The CPA-DD confirms to meet the procedures provided in the methodology /B03/ and PoA-DD /04/. The formulae are correctly presented for the determination of emission reductions.

CCL has assessed the calculations of emission reductions and emissions factor. Corresponding calculations have been carried out based on calculation spreadsheets /11/. The parameters and equations presented in the CPA-DD/02/, as well as other applicable documents, have been compared

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with the information and requirements presented in the PoA-DD /04/, CPA-DD template /B06/ and the methodology /B02/.

Baseline Emissions

$$BEy = DV \times GFy \times DBy$$

Where,

DV = Lamp Emission Factor

GFy = Grid Factor in year *y*

DBy = Dynamic Baseline Factor in year *y*

DV is calculated as per equation 2 of the applied methodology AMS-III.AR, as:

$$DV = FUR \times O \times U \times EF/1000 \times LF \times n \times NTG$$

Where,

FUR = Fuel use rate

O = Utilization rate

U = Annual utilization

EF = Fuel emissions factor

LF = Leakage factor

n = Number of fuel-based lamps replaced per project lamp

NTG = Net-to-gross adjustment factor

Project Emissions

As per §16 of applied methodology, AMS-III.AR /B02/ "there are no project emissions if the project lamp charging mechanism utilized is as defined in § 2(a) of methodology".

$$PEy = 0$$

PEy = Project emissions in year *y*

Emission reductions are calculated as:

$$ERy = \sum_{i,j} N_{i,j} \times (BE_{y,i} - PE_{y,i,j}) \times (OF_{y,i,j})$$

ERy = Emission reductions in year *y* (tCO₂e)

N_{i,j} = Number of project lamps distributed to end users of type *i* with charging method *j*

OF_{y,i,j} = Percentage of project lamps distributed to end users that are operating and in service in year *y*, for each lamp type *i* and charging method *j*

All parameters used in Emission Reduction calculations are prescribed by the applied approved methodology AMS-III.AR, version 03/B03/. In summary, the calculations of emission reductions are considered to be correct and according to requirements.

The implementation plan provided by the CPA implementer for the sales of the project lamps/02/ is provided below:

Year	Number of project lamps to be distributed
2012	14,000
2013	24,000
2014	24,000
2015	24,000

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2016	24,000
2017	24,000
2018	24,000
2019	24,000

CL 1 and CL 5 were raised with regards to the implementation plan and have been addressed. The implementation plan has been used to calculate the ex-ante emission reductions. This is in line with the requirements of applied approved methodology AMS-III.AR, version 03/B02/.

3.6 Monitoring Plan

The monitoring plan presented in the CPA-DD /02/ complies with the requirements of the PoA-DD /04/, the applied monitoring methodology /B03/. The assessment team has verified all parameters in the monitoring plan against the requirements of the methodology and no deviations have been found.

The assessment team through document review and interviews with the relevant personnel has reviewed the monitoring procedures. Monitoring procedures are based on Option 1 of § 11 the methodology /B02/. The information provided has allowed the assessment team to confirm that the proposed monitoring plan is feasible within the project design. The relevant points of monitoring plan have been discussed with the PoA managing entity and the CPA implementer. Specifically, these points include the monitoring methodology, data management, sampling procedures, records and data control procedures, quality assurance and quality control procedures to be implemented in the context of the activity. CL 9 was raised in this regard and has been addressed.

No sampling is required for the CPA as the CPA implementer has opted only for Option 1 of § 11 the methodology /B02/.

The parameter that is to be monitored ex-post are:

- Number of project lamps distributed to end users of type i with charging method j ($N_{i,j}$)

In summary, the parameters determined ex-post have been presented correctly according to requirements and are considered in accordance with the applied methodology /B02/.

The responsibilities and institutional arrangements for data collection and archiving have been clearly provided. The information provided in the CPA-DD /02/ could be confirmed based on the on-site interviews and also through the submitted documentary evidence namely CME management manual /09/ covering all requirements as stated in section E.7.2 of PoA DD /04/. Based on the same, it can be confirmed that the PoA managing entity and the CPA implementer will be able to implement the monitoring plan and the achieved emission reductions can be reported ex-post and verified.

3.7 Stakeholder Consultation

It has been indicated in the PoA DD /04/ that the local stakeholder consultation shall be done at the CPA Level because there will be many CPAs in different regions of the Host Country, i.e. India, in the future. Since, there is no time constraint for the inclusion of CPAs, it is good to invite comments at the commencement of project activity / CPA, as it will lead to meaningful stakeholder consultation. This is deemed appropriate and acceptable to the validation team.

A local stakeholder consultation was held on 17/12/2011 in village of Bachenahatty in the mandal of Magdi, district of Ramnagar in Karnataka to introduce the project to the local stakeholders. The CPA implementer decided to invite comments from stakeholders by distributing pamphlets to the villagers, so that the invitation to attend the stakeholder consultation and comments could actually reach the target stakeholders. As has been evidenced in the CPA, inviting stakeholder consultation through an advertisement in newspaper was not considered feasible and local stakeholders were invited through pamphlets/02/. CAR 10 was raised in this regard and has been addressed and therefore successfully closed.

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Local stakeholder comments were invited through distribution of pamphlets in Hindi and Kannada (local language)/22-1/. A letter of invitation was also sent to the village head on 21/11/2011 for participation in Local Stakeholder Consultation/22-2/. Small stakeholder consultations were also conducted in other states in CPA, viz. Andhra Pradesh/22-3/, Kerala/22-4/, Tamil Nadu/22-5/. Local stakeholders were introduced to the type of LED light being used in these states. However these comments were not recorded as per discussion with the CPA implementer during the validation team's site visit/a/.

The communication and stakeholder invitation processes was completed in the last week of November 2011 and first week of December 2011 first, so that sufficient time could be given to stakeholders to raise the comments. Local stakeholder comments were invited before the publication of programme DDs on the UNFCCC website for GSP and hence deemed appropriate.

The validation team noted that all the relevant stakeholders identified are in line with the definition of stakeholders as per latest version of CDM Glossary of terms /B05/.

A summary of the comments received and a note on how due account was taken of the concerns raised in the above public consultation are included in section D.3 of the CPA-DD /02/. From the summary of the stakeholder comments, it can be deduced that major concern of the stakeholders were related to the light output of the project lamps and the high price of the project lamps. Both the concerns of the local stakeholders were addressed by the CPA implementer.

The validation team reviewed all relevant information of local stakeholder consultation meeting and confirms that the LSC meeting meets to the requirement of § 127 of VVM, version 01.2 /B01/.

The validation team confirms that the process for conducting the local stakeholders meeting is adequate and credible.

3.8 Environmental Analysis

It has been indicated in the PoA-DD /04/ that environmental analysis shall be provided at the CPA level. This is deemed appropriate and acceptable to the validation team.

The CPA involves solar LED lighting project, as per Schedule 1 of Environmental Impact Assessment Notification 1994/B06-13/ EIA is only required for a list projects. Solar LED lighting project is not there in the list and hence exempted from conducting EIA.

Potential negative effects of the solar LED lighting project are management of used/old batteries. This issue has been identified in the CPA. E-waste rules/B06-15/ provide guidelines on the disposal of batteries. This has been verified at the website for ministry of environment and forests, India/B06-16/. E-waste rules came into effect from 01/05/2012.

In order to comply with the rules, the PP has set up a battery exchange programme, under which all wholesale outlets and intermediaries are obligated to offer a discount on new batteries when an old battery is returned. Used batteries that have been collected as such will be sent back through the distribution chain for proper disposal. The project proponent will ensure that the disposal of used batteries from the project will only be carried out by entities that have been licensed by Indian authorities

The validation team confirms that the environmental analysis is adequate and credible. This complies with §136(d) of VVM, version 01.2/B01/.

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APPENDIX A

THE VALIDATION PROTOCOL FOR CDM PROGRAMME OF ACTIVITIES

CARBONSOFT EMERGING MARKETS CPA01

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Table 1: Conformity of CDM Programme of Activities

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	GSP	Final
G. GENERAL DESCRIPTION OF SMALL-SCALE CDM PROGRAMME ACTIVITY (CPA)				
G.1. Title of the small-scale CPA:				
G.1.1. Does the used CPA title clearly enable to identify the unique CDM programme activity?	/01/, /03/	Yes, the title stated in the CPA-DD clearly enables to identify the unique CDM programme activity.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
G.1.2. Are there any indications concerning the revision number and the date of the revision?	/01/	Yes, the GSP-CPA-Specific indicates the date of the document as 20/12/2011 but the version number of the document is missing. Hence a CAR is raised. CAR 1: In section A.1 of the CPA-DD the version number of the document has not been provided and thus are no indications concerning the revision number of the document.	CAR 1	<input checked="" type="checkbox"/>
G.1.3. Is this consistent with the time line of the programme's history?	/01/	Yes, this is consistent in time line of the programme's history.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
G.2. Description of the small-scale CPA:				
G.2.1. Is the description delivering a transparent overview of the CPA?	/01/	The project activity involves installation of solar powered LED lamps in India. These LED lamps will replace the kerosene fired lamps thereby reducing the fossil fuel consumption and associated GHG emissions. CAR 2: However description does not deliver a transparent overview of the CPA. Like, "LED lamps will lead to abatement of the GHG missions."	CAR 2	<input checked="" type="checkbox"/>
G.2.2. Is the project implementation schedule available; are there any risks for delays?	/01/	The CPA-DD in section A.2, just mentions that the CPA involves replacement of kerosene used for lighting purpose in India, with LED lamps but the detailed implementation schedule for the same is missing. Hence CL is raised. CL 1: PP is requested to provide the schedule of implementation plan for the LED lamps across India and evidence for the same.	CL-1	<input checked="" type="checkbox"/>
G.2.3. Is CPA specific data clearly indicated as per	/01/	Yes, CPA specific data is clearly indicated as per CPA template.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	GSP	Final
CPA template?				
G.2.4. What proofs are available demonstrating that the programme description is in compliance with the actual situation or planning?	/01/	<p>The CPA-DD in section A.2, just mentions that the CPA involves replacement of kerosene used for lighting purpose in India, with LED lamps but no proofs are available to demonstrate that the programme description is in compliance with the actual situation or planning. Hence the CL is raised.</p> <p>CL 2: The PP needs to provide evidences / proofs which can demonstrate that the programme description is in compliance with the actual situation or planning to substantiate the same by providing the sales agreement and other evidences.</p> <p>As the actual sale and distribution hasn't taken place actual sales data is not available. The supporting document "Agreement for CPA Participation"/23/, has been provided to DOE for validation.</p>	CL-2	<input checked="" type="checkbox"/>
G.2.5. Is the information provided by these proofs consistent with the information provided by the CPA-DD and the PoA-DD?	/01/	Depends on closure of CL 2 above.	Refer CL-2	<input checked="" type="checkbox"/>
G.2.6. Is all information presented consistent with details provided by further chapters of the CPA-DD and the PoA-DD?	/01/	Depends on closure of CL 2 above.	Refer CL-2	<input checked="" type="checkbox"/>
G.3. Entity/individual responsible for the small scale CPA:				
G.3.1. Does it become evident which entity/individual is responsible for the CPA (the CPA implementer)?	/01/	Yes, It is evident from the CPA-DD that Eureka Forbes, Ltd (India) is the entity responsible for the CPA i.e., CPA implementer.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
G.3.2. Is there any document substantiating that the stated entity/individual is responsible for the implementation of the CPA?	/01/	<p>No, there is no documentary evidence to establish that Eureka Forbes, Ltd (India) is the entity responsible for the implementation of the CPA.</p> <p>CL 3: PP needs to provide documentary evidences to substantiate that that the stated entity/individual is responsible for the implementation of the CPA.</p>	CL-3	<input checked="" type="checkbox"/>
G.3.3. Is all information on the CPA implementer provided in consistency with details provided by further chapters of the CPA-DD	/01/	Yes, information on the CPA implementer provided is in consistency with details provided in Annex 1 of the CPA-DD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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CHECKLIST TOPIC / QUESTION (in particular annex 1)?	Ref.	COMMENTS	GSP	Final
G.4. Technical description of the small-scale CPA:				
G.4.1. Identification of the small scale CPA:				
G.4.1.1. Is the Host Party stated and consistent with the information provided in the PoA-DD?	/01/	Yes, India has been indicated as the host country.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
G.4.1.2. Does the information provided on the location of the programme activity allow for a unique identification of the location and the boundary of the CPA in terms of the geographical area?	/01/	<p>No, the information provided on the location of the programme of activity does not allow for a unique identification of the location and the boundary of the CPA in terms of the geographical area. However geographical reference provided exceeds the limit of one page.</p> <p>CAR3: In the section A.4.1.2, the description of geographic reference or other means of identification allowing the unique identification of the small-scale CPA is not in line with the requirements of CDM-SSC-CPA-DD Form (version 01) as it does not provide:</p> <ul style="list-style-type: none"> • The contact details of the entity responsible for CPA • Geographic reference of the CPA. • Geographical reference provided exceeds the limit of one page. <p>CL4: The PP is requested to provide the documentary evidence to validate the area covered under this CPA.</p>	CAR 3 & CL4	<input checked="" type="checkbox"/>
G.4.1.3. Are the geographic reference and the means of identification transparent and clear? Is GPS data provided?	/01/	<ul style="list-style-type: none"> • Depends on the Closure of CAR-3. 	Refer CAR 3	<input checked="" type="checkbox"/>
G.4.1.4. How is it ensured and/or demonstrated, that the project proponents can implement the project (ownership, licenses, contracts etc.)?	/01/	<p>In section A.4 of the CPA-DD, the PP provides information on key product characteristic but fails to ensure how they can implement the project. Hence CL is raised.</p> <p>CL5: PP needs to demonstrate through suitable evidences how it can ensure the implementation of the project.</p>	CL5	<input checked="" type="checkbox"/>
G.4.2. Duration of the small scale CPA: Description of a typical small-scale CDM programme activity (CPA)				
G.4.2.1. Is the starting date of the small scale CPA	/01/	Yes, the starting date of the small scale CPA is provided as 20/12/2011 in the CPA-DD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	GSP	Final
provided?				
G.4.2.2. Is the starting date consistent with the PoA timeline and the requirements of the PoA procedures (Procedures para 5d, considering exception according to EB47, meeting report, para 72)?	/01/	<p>No, the starting date of CPA mentioned in section A.4.2.1 of the CPA-DD is consistent with the starting date of the PoA, its timeline and the requirements of the PoA procedures but both the dates are before the date of start of GSCP. Hence a CAR is raised.</p> <p>CAR 4: The starting date of the CPA as mentioned in the section A.4.2.1 of CPA-DD is prior to the date of publication of CPA DD and PoA DD for global stakeholder consultation process and eligibility of Programme of Activity (PoA) is doubtful.</p>	CAR 4	<input checked="" type="checkbox"/>
G.4.2.3. Is the operational lifetime of the small scale CPA clearly defined and plausible?	/01/	<p>Yes, the operational lifetime of the small scale CPA has been clearly defined.</p> <p>CAR 5: However the lifetime is not consistent with the information provided in sec A.2 of CPA-DD. It is not clear if the project implementation is for 2 years or 7 years. As, the project has chosen Option 1 from para 2 of the applied methodology, credits can be claimed only for 2 years and if there is any phase wise implementation, it is to be stated explicitly. Also, supporting documents are to be provided for the same.</p>	CAR 5	<input checked="" type="checkbox"/>
G.4.3. Choice of the crediting period and related information:				
G.4.3.1. Is the starting date of the crediting period stated and plausible (in accordance with the PoA procedures)?	/01/	Yes, the starting date of the crediting period of the CPA is clearly stated and plausible.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
G.4.3.2. Is it evident that fixed crediting period is chosen, what is the length of the crediting period?	/01/	Renewable crediting period has been chosen and the length of crediting period chosen is 7 years.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
G.4.4. Estimated amount of emission reductions over the crediting period:				
G.4.4.1. Estimated amount of emission reductions stated?	/01/	<p>The estimated amount of emission reduction stated in the CPA-DD is:</p> <ul style="list-style-type: none"> Total: 205250tCO₂e Annual Average: 29321 tCO₂e/year. <p>CL 6: In section B.5.1 of the CPA-DD has used the values and calculations have</p>	CL-6	<input checked="" type="checkbox"/>

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	GSP	Final
		<p>been done in Annex 3. However:</p> <ul style="list-style-type: none"> PP has used an average value of Fuel Use Rate (FUR) of 0.073 litres/hour for India. However this value is not consistent as the family size is taken as 5 but the reference used for the same, states that the family size of 5 is for rural and 4.5 for urban areas. No justification for the selection of the value for family size as 5 has been provided. For the determination of parameter DB_y, PP has used an average value of 5% of annual real GDP growth in place of national growth rate of kerosene fuel use in lighting. PP needs to demonstrate the appropriateness, relevance of the data and also demonstrate how the value arrived at is conservative. PP needs to substantiate the value of 0.3 used for parameter W_{jt} with documentary evidence. 		
G.4.4.2. Is the estimated amount consistent with section B 5 of the CPA-DD?	/01/	Yes, the estimated amount is consistent with section B.5 of the CPA-DD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
G.4.5. Public funding of the small-scale programme activity				
G.4.5.1. Is the information provided on public funding provided in compliance with the actual situation or planning?	/01/	<p>No, the information on public funding provided or diversion of ODA is not clear and evident. Hence CL is raised.</p> <p>CL7: In the section A.4.5 of PP needs to justify and demonstrate by supporting documents that no ODA has been diverted in this project activity.</p>	CL7	<input checked="" type="checkbox"/>
G.4.5.2. Is all information provided consistent with the details given in remaining chapters of the CPA-DD (in particular annex 2)?	/01/	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
G.4.6. Information to confirm that the proposed small scale CPA is not a de-bundled component (considering PoA-de-bundling guidance):				
G.4.6.1. Is there a system or procedure to detect whether a SSC-CPA to be included in the PoA is not a de-bundled component of another CPA or CDM project?	/01/	Depends on the closure of CAR 11 of PoA.	Refer CAR 11 of PoA	<input checked="" type="checkbox"/>
G.4.7. Confirmation that the SSC CPA is neither registered as an individual CDM project activity or is part of another registered PoA				
G.4.7.1. Confirmation provided by coordinating/managing entity or CPA	/01/	The PP in section A.4.7 of the CPA-DD states that " <i>For other CPAs of the Carbon Soft Open Source PoA double counting is prevented by</i>	CL8	<input checked="" type="checkbox"/>

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	GSP	Final
implementer?		assigning individual reference numbers to each individual project lamp". But the reference numbering system has not been clearly detailed. Hence CL is raised. CL 8: PP needs to explain in detail about the reference numbering system used to identify each project lamp, which makes it so unique so as to prevent double counting.		
G.4.7.2. Is the CPA implementer undertaking another similar project activity in the same region? If yes, are the project activities uniquely identified and not overlapping with this CPA?	/01/	Depends on the closure of CL 8 above.	Refer CL 8	<input checked="" type="checkbox"/>
H. ELIGIBILITY OF THE SMALL SCALE CPA AND ESTIMATION OF EMISSION REDUCTIONS:				
H.1. Title and reference of the registered PoA to which the small scale CPA is added:				
H.1.1. Are the title and reference correctly provided?	/01/	Title of the PoA has been correctly referenced by the CPA.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
H.2. Justification of why the small-scale CPA is eligible to be included in the registered PoA:				
H.2.1. Criterion 1: The geographical boundary of the CPA including any time-induced boundary consistent with the geographical boundary set in the PoA	/01/, /03/	No, CPA-DD does not specify any justification with respect to the geographical boundary of the CPA. CAR 6: Sec. B.2 of CPA-DD does not specify any justification with respect to the geographical boundary of the CPA.	CAR 6	<input checked="" type="checkbox"/>
H.2.2. Criterion 2: Conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (e.g. programme logo);	/01/, /03/	All project lamps distributed by the project developer will have a Unique Identification Number. The number will be placed on each lamp by means of a sticker. Counting will be done based on such unique numbers so as to ensure no double counting.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
H.2.3. Criterion 3: The specifications of technology/measure including the level and type of service, performance specifications including compliance with testing/certifications;	/01/, /03/	In section A.4 of the CPA-DD, PP does provide technical design specification of project lamps but they are not in line with the design specification criteria mentioned under paragraph 5 of the applied methodology. Hence CAR is raised. CAR 7: The technical design specifications provided for the project lamps in the	CAR 7	<input checked="" type="checkbox"/>

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	GSP	Final
		section A.4 of the CPA-DD is not in line with the design specification criteria mentioned under paragraph 5 of the applied methodology.		
H.2.4. Criterion 4: Conditions to check the start date of the CPA through documentary evidence;	/01/, /03/	Depends on the closure of CAR 4.	Refer CAR 4	<input checked="" type="checkbox"/>
H.2.5. Criterion 5: Conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by CPAs;	/01/, /03/	CAR 8: In sec A.4.2.2 PP has not specified the eligibility criteria clearly in line with the applicable standards. Also, in the section B.2 of the CPA-DD, the PP has not explained the inclusion of CPA under the PoA by justifying the applicability under each eligibility criteria for inclusion of a SSC-CPA in the PoA in line with "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities (version 01.0)" EB 65 Annex 3. FAR 1: To confirm that the project lamps distributed through the project activity is no more than five per household or business location, sales record of the distribution of project lamps has not been provided. This shall be validated during verification.	CAR 8 FAR 1	FAR 1
H.2.6. Criterion 6: The conditions that ensure that CPAs meet the requirements pertaining to the demonstration of additionality as specified in Section A.4.2.2 of PoA-DD;	/01/, /03/	Depends on the closure of CAR 8.	Refer CAR 8	<input checked="" type="checkbox"/>
H.2.7. Criterion 7: ThePoA-specific requirements stipulated by the CME including any conditions related to undertaking local stakeholder consultations and environmental impact analysis;	/01/, /03/	Depends on the closure of CAR 8.	Refer CAR 8	<input checked="" type="checkbox"/>
H.2.8. Criterion 8: Conditions to provide an affirmation that funding from Annex I parties, if any, does not result in a diversion of official development assistance;	/01/, /03/	Depends on the closure of CAR 8.	Refer CAR 8	<input checked="" type="checkbox"/>
H.2.9. Criterion 9: Where applicable, target group (e.g. domestic/commercial/industrial, rural/urban, grid- connected/off-grid) and	/01/, /03/	Depends on the closure of CAR 8.	Refer CAR 8	<input checked="" type="checkbox"/>

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	GSP	Final															
distribution mechanisms (e.g. direct installation);																			
H.2.10. Criterion 10: Where applicable, the conditions related to sampling requirements for a PoA in accordance with the approved guidelines/standard from the Board pertaining to sampling and surveys;	/01/, /03/	Depends on the closure of CAR 8.	Refer CAR 8	<input checked="" type="checkbox"/>															
H.2.11. Criterion 11: Where applicable, the conditions that ensure that every CPA in aggregate meets the small-scale or micro-scale threshold criteria and remains within those thresholds throughout the crediting period of the CPA;	/01/, /03/	Depends on the closure of CAR 8.	Refer CAR 8	<input checked="" type="checkbox"/>															
H.2.12. Criterion 12: Where applicable, the requirements for the de-bundling check, in case CPAs belong to small-scale (SSC) or micro-scale project categories.	/01/, /03/	Depends on the closure of CAR 8.	Refer CAR 8	<input checked="" type="checkbox"/>															
H.3. Assessment and demonstration of additionality of the SSC CPA, as per eligibility criteria listed in the registered PoA:																			
H.3.1. Are the key criteria and data for assessing additionality of a SSC-CPA that are included into the PoA addressed?	/01/, /03/	NA Additionality has been demonstrated at the Po A level.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>															
H.3.2. Are the key criteria and data for assessing additionality of a SSC-CPA that are included into the PoA met?	/01/, /03/	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>															
H.3.3. Does it become evident how these criteria were applied to assess the additionality of the CPA?	/01/, /03/	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>															
H.3.4. Does this list include at least one of the following barriers?		<table border="1"> <thead> <tr> <th>Barrier</th> <th>Discussed?</th> <th>Verifiable?</th> </tr> </thead> <tbody> <tr> <td>Investment</td> <td>NA</td> <td>NA</td> </tr> <tr> <td>Technological</td> <td>NA</td> <td>NA</td> </tr> <tr> <td>Due to prevailing practice</td> <td>NA</td> <td>NA</td> </tr> <tr> <td>Other</td> <td>NA</td> <td>NA</td> </tr> </tbody> </table> NA	Barrier	Discussed?	Verifiable?	Investment	NA	NA	Technological	NA	NA	Due to prevailing practice	NA	NA	Other	NA	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Barrier	Discussed?	Verifiable?																	
Investment	NA	NA																	
Technological	NA	NA																	
Due to prevailing practice	NA	NA																	
Other	NA	NA																	

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	GSP	Final
H.4. Description of the sources and gases included in the project boundary and proof that the small scale CPA is located within the geographical boundary of the registered PoA				
H.4.1. Does the SSC-CPA boundary include the physical and geographical location where the programme activities take place?	/01/	Depends on the closure of CAR 3 & CL 4.	Refer CAR 3 & CL 4	<input checked="" type="checkbox"/>
H.4.2. Is there any proof that the CPA is located within the geographical boundary of the registered PoA?	/01/	Depends on the closure of CAR 3 & CL 4.	Refer CAR 3 & CL 4	<input checked="" type="checkbox"/>
H.4.3. Are all sources and gases within the boundary considered in a clear manner?	/01/	Yes, the sources and gases within the boundary have been considered in a clear manner. CO ₂ has been included in the baseline as well as project activity.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
H.4.4. Do the spatial and technological boundaries as verified on-site comply with the discussion provided by / indication included to the PoA-DD or CPA-DD?	/01/	Depends on the closure of CAR 3 & CL 4.	Refer CAR 3 & CL 4	<input checked="" type="checkbox"/>
H.5. Emission reductions:				
H.5.1. Data and parameters that are available at validation (B.5.1.):				
H.5.1.1. Are the equations, including fixed parametric values, to be used for calculation of emission reductions of a SSC-CPA, completely presented?	/01/, /03/, /B02/	Yes, the equations, including fixed parametric values, to be used for calculation of emission reductions of a SSC-CPA is completely presented.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
H.5.1.2. Is the list of parameters presented in chapter B.5.1 considered to be complete with regard to the requirements of the applied methodology?	/01/, /03/, /B02/	Yes, the list is complete.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
H.5.2. Ex-ante calculation of emission reductions (B.5.2.):				
H.5.2.1. Are the GHG calculations documented in a complete and transparent manner?	/01/, /03/, /10/	Depends on the closure of CL 6 above.	Refer CL 6	<input checked="" type="checkbox"/>
H.5.2.2. Is the data provided in this section consistent with data as presented in other chapters of the PoA-DD or CPA-	/01/, /03/, /10/	Depends on the closure of CL 6 above.	Refer CL 6	<input checked="" type="checkbox"/>

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	GSP	Final
DD?				
H.5.3. Summary of the ex-ante estimation of emission reductions (B 5.3)				
H.5.3.1. Will the programme activity result in fewer GHG emissions than the baseline scenario?	/01/	Depends on the closure of CL 6 above.	Refer CL 6	<input checked="" type="checkbox"/>
H.5.3.2. Is the form/table required for the indication of projected emission reductions correctly applied?	/01/	Yes, the form/table required for the indication of projected emission reductions has been correctly applied in section B.5.3 of the CPA-DD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
H.5.3.3. Do these values comply with small-scale criteria for every year?	/01/	Depends on the closure of CL 6 above.	Refer CL 6	<input checked="" type="checkbox"/>
H.5.3.4. Is the projection in line with the envisioned time schedule for the programme's implementation and the indicated crediting period?	/01/	Depends on the closure of CAR 4 above.	Refer CAR 4	<input checked="" type="checkbox"/>
H.5.3.5. Is the data provided in this section in consistency with data as presented in other chapters of the PoA- or CPA-DD?	/01/	Depends on the closure of CL 6 above.	Refer CL 6	<input checked="" type="checkbox"/>
H.6. Application of the monitoring methodology and description of the monitoring plan				
H.6.1. Description of the monitoring plan for the SSC-CPA				
H.6.1.1. Is the operational and management structure clearly described and in compliance with the envisioned situation?	/01/	<p>No, the operational and management structure has not been clearly described in the section B.6.1 of CPA-DD and hence it cannot be ascertained whether it is in compliance with the envisioned situation. Hence CL is raised.</p> <p>CL 9: In section B.6.1 of the CPA-DD, clarify:</p> <ul style="list-style-type: none"> • Operational and management structure along with procedure for flow of information • The procedure for monitoring, data collection, recording, checking, data transfer and archiving system for CPA and justify how it is consistent for all CPAs. 	CL 9	<input checked="" type="checkbox"/>
H.6.1.2. Are responsibilities and institutional arrangements for data collection and archiving clearly provided?	/01/	Depends on the closure of CL 9 above.	Refer CL 9	<input checked="" type="checkbox"/>

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	GSP	Final																								
H.6.1.3. Does the monitoring plan provide current good monitoring practice?	/01/	<p>The monitoring plan provided in the section B.6.1 of the CPA-DD is not complete and hence does not provide current good monitoring practices. Hence CLs is raised.</p> <p>CL-10: The PP is requested to explain the applicability of the following parameters mentioned in section B.6.1 of CPA-DD with respect to their applicability and requirement for emission reduction calculation which do not meet the parameters listed in E.7.1 of PoA-DD, Like:</p> <p>• n_0</p>	CL 10	<input checked="" type="checkbox"/>																								
H.6.1.4. If applicable: Does annex 4 provide useful information enabling a better understanding of the envisioned monitoring provisions?	/01/	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																								
H.6.1.5. Is the list of parameters presented in chapter B.6.1 considered to be complete with regard to the requirements of the applied methodology?	/01// B02/	Depends on closure of CL 10 above.	Refer CL 10	<input checked="" type="checkbox"/>																								
H.6.1.6. Parameter Title: n_1 – Number of units sold	/01// B02/	<table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No/NA</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>Yes</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>Yes</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>Yes</td> </tr> <tr> <td>Source clearly referenced?</td> <td>No</td> </tr> <tr> <td>Correct value provided for estimation?</td> <td>NA</td> </tr> <tr> <td>Has this value been verified?</td> <td>NA</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>Yes</td> </tr> <tr> <td>Correct reference to standards?</td> <td>No</td> </tr> <tr> <td>Indication of accuracy provided?</td> <td>No</td> </tr> <tr> <td>QA/QC procedures described?</td> <td>Yes</td> </tr> <tr> <td>QA/QC procedures appropriate?</td> <td>Yes</td> </tr> </tbody> </table> <p>CAR 9: The data source, value, indication of accuracy is not correctly provided for parameter n_1.</p>	Monitoring Checklist	Yes / No/NA	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	No	Correct value provided for estimation?	NA	Has this value been verified?	NA	Measurement method correctly described?	Yes	Correct reference to standards?	No	Indication of accuracy provided?	No	QA/QC procedures described?	Yes	QA/QC procedures appropriate?	Yes	CAR 9	<input checked="" type="checkbox"/>
Monitoring Checklist	Yes / No/NA																											
Title in line with methodology?	Yes																											
Data unit correctly expressed?	Yes																											
Appropriate description of parameter?	Yes																											
Source clearly referenced?	No																											
Correct value provided for estimation?	NA																											
Has this value been verified?	NA																											
Measurement method correctly described?	Yes																											
Correct reference to standards?	No																											
Indication of accuracy provided?	No																											
QA/QC procedures described?	Yes																											
QA/QC procedures appropriate?	Yes																											

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	GSP	Final	
H.6.1.7. Parameter Title: D_{intro} – Date of purchase of project lamp	/01// B02/	Monitoring Checklist	Yes / No/NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Title in line with methodology?	Yes		
		Data unit correctly expressed?	Yes		
		Appropriate description of parameter?	Yes		
		Source clearly referenced?	Yes		
		Correct value provided for estimation?	Yes		
		Has this value been verified?	NA		
		Measurement method correctly described?	Yes		
		Correct reference to standards?	NA		
		Indication of accuracy provided?	NA		
		QA/QC procedures described?	Yes		
		QA/QC procedures appropriate?	Yes		
		H.6.1.8. Parameter Title: Customer Information	/01// B02/		
Title in line with methodology?	Yes				
Data unit correctly expressed?	NA				
Appropriate description of parameter?	Yes				
Source clearly referenced?	Yes				
Correct value provided for estimation?	NA				
Has this value been verified?	NA				
Measurement method correctly described?	Yes				
Correct reference to standards?	NA				
Indication of accuracy provided?	NA				
QA/QC procedures described?	Yes				
QA/QC procedures appropriate?	Yes				
H.6.1.9. Parameter Title: UI	/01// B02/			Monitoring Checklist	Yes / No/NA
		Title in line with methodology?	Yes		
		Data unit correctly expressed?	NA		
		Appropriate description of parameter?	Yes		
		Source clearly referenced?	Yes		
		Correct value provided for estimation?	NA		
		Has this value been verified?	NA		
		Measurement method correctly described?	Yes		
		Correct reference to standards?	NA		

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	GSP	Final
		Indication of accuracy provided?	NA	
		QA/QC procedures described?	Yes	
		QA/QC procedures appropriate?	Yes	
H.6.1.10. Parameter Title:n_o – Number of units in operation and in service	/01// B02/	Depends on closure of CL 10 above.	Refer CL 10	<input checked="" type="checkbox"/>
I. ENVIRONMENTAL ANALYSIS				
I.1. Definition of the level at which environmental analysis as per requirements of the CDM modalities and procedures is undertaken:				
I.1.1. Is it defined whether the environmental analysis takes place at PoA or CPA level?	/01/	Yes, it is defined that environmental analysis takes place at CPA level. However, no Environment Impact assessment is required for such project activities in India.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
I.1.2. Is the choice whether the environmental analysis takes place at PoA or CPA level justified?	/01/	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
J. STAKEHOLDERS' COMMENTS				
J.1. Please indicate the level at which local stakeholder comments are invited. Justify the choice:				
J.1.1. Is there a clear statement whether the stakeholder comments were invited at PoA or CPA level?	/01/	Yes it is mentioned in the CPA-DD that the stakeholder comments are invited at CPA level. But the process of identifying and inviting the stakeholders as well as comment is not detailed in a transparent manner in the CPA-DD. Hence CAR is raised. CAR 10: Section D.2 of CPA-DD does not provide: <ul style="list-style-type: none">Date of advertisement for local stakeholder consultation invitation.Substantiate with evidences that a reasonable time for submission of comments was provided	CAR 10	<input checked="" type="checkbox"/>
J.1.2. Is the choice justified in a clear and reasonable manner?	/01/	Depends on the closure of CAR 10 above.	Refer CAR 10	<input checked="" type="checkbox"/>
K. ANNEXES 1 – 4				
K.1. Annex 1: Contact Information				
K.1.1. Is the information provided consistent	/01/	Depends on the closure of CAR 5 of PoA.	Refer CAR	<input checked="" type="checkbox"/>

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	GSP	Final
with the one given under section A.3?			5 of PoA	
K.1.2. Is the information on all private participants and directly involved Parties presented?	/01/	Depends on the closure of CAR 5 of PoA.	Refer CAR 5 of PoA	<input checked="" type="checkbox"/>
K.2. Annex 2: Information regarding public funding				
K.2.1. Is the information provided on the inclusion of public funding (if any) in consistency with the actual situation presented by the project participants?	/01/	Depends on the closure of CL 7 above.	Refer CL7	<input checked="" type="checkbox"/>
K.2.2. If necessary: Is an affirmation available that any such funding from Annex-I-countries does not result in a diversion of ODA?	/01/	Depends on the closure of CL 7 above.	Refer CL7	<input checked="" type="checkbox"/>
K.3. Annex 3: Baseline information				
K.3.1. If additional background information on baseline data is provided: Is this information consistent with data presented by other sections of the PoA- or CPA-DD?	/01/	Depends on the closure of CL 6 above.	Refer CL 6	<input checked="" type="checkbox"/>
K.3.2. Is the data provided verifiable? Has sufficient evidence been provided to the validation team?	/01/	Depends on the closure of CL 6 above.	Refer CL 6	<input checked="" type="checkbox"/>
K.3.3. Does the additional information substantiate / support statements given in other sections of the PoA- or CPA-DD?	/01/	Depends on the closure of CL 6 above.	Refer CL 6	<input checked="" type="checkbox"/>
K.4. Annex 4: Monitoring information				
K.4.1. If additional background information on monitoring is provided: Is this information consistent with data presented in other sections of the PoA- or CPA-DD?	/01/	No additional background information on monitoring is provided.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	GSP	Final
K.4.2. Is the information provided verifiable? Has sufficient evidence been provided to the validation team?	/01/	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
K.4.3. Do the additional information and / or documented procedures substantiate / support statements given in other sections of the PoA- or CPA-DD?	/01/	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Table 2: Resolution of Corrective Action and Clarification Requests (CPA-DD)

Clarifications and corrective action re-requests by validation team	Ref. to table 1	Summary of programme activity implementer's response	Validation team Conclusion
CORRECTIVE ACTION REQUESTS			
CAR 1: In section A.1 of the CPA-DD the version number of the document has not been provided and thus are no indications concerning the revision number of the document.	G.1.2	In Section A.1 of the CPA-DD version 2, the version number of the document has been provided. The date of revision is revised to the completion date of the CPA-DD. Updated version of CPA-DD is version 3.	In section A.1 of revised version of CPA-DD/02/ version number and date of revision has been provided. CAR closed
CAR 2: However description does not deliver a transparent overview of the CPA. Like, "LED lamps will lead to abatement of the GHG missions."	G.2.1.	Section A.2 of the CPA-DD has been revised and now it includes a transparent overview of the CPA. LED lamps mentioned in the section A.2 refers to the solar based LED lamps (Project Lamps). The same is updated in the section A.2 of the CPA-DD. Now the statement is revised to: "The proposed project lamps will lead to abatement of the green house gases". Now it clearly	Section A.2 of CPA-DD/02/ has been revised and it includes a transparent overview of the CPA. Ambiguous statements like, "LED lamps will lead to abatement of the GHG missions" have been removed.

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		representing the solar based LED lamps will lead to abatement of the GHGs and provide clear description of the project.	CAR closed
CAR 3: In the section A.4.1.2, the description of geographic reference or other means of identification allowing the unique identification of the small-scale CPA is not in line with the requirements of CDM-SSC-CPA-DD Form (version 01) as it does not provide: <ul style="list-style-type: none"> The contact details of the entity responsible for CPA Geographic reference of the CPA. Geographical reference provided exceeds the limit of one page 	G.4.1.2 / G.4.1.3 / H.4.1 / H.4.2 / H.4.4 /	The section A.4.1.2 of the CPA-DD has been revised and now it includes: <ul style="list-style-type: none"> The contact details of the entity responsible for CPA Geographical reference of the CPA Geographical reference provided now limits to one page <p>“Name/contact details of the entity/individual responsible for the CPA is provided in Annex 1.” The same is inserted in section A.4.1.2 of the CPA-DD.</p> <p>Updated version of CPA-DD is version 3.</p>	Section A.4.1.2 of CPA-DD/02/ provides geographical reference of the CPA and now geographical reference provided is limited to one page. The contact details of the entity responsible for CPA has also been provided in section A.4.1.2 CAR closed
CAR 4: The starting date of the CPA as mentioned in the section A.4.2.1 of CPA-DD is prior to the date of publication of CPA-DD and PoA-DD for global stakeholder consultation process and eligibility of Programme of Activity (PoA) is doubtful.	G.4.2.2 / H.2.4 / H.5.3.4	The starting date of the CPA has been revised to 02/08/2012. This is after the date of publication of CPA-DD and PoA-DD for global stakeholder consultation process. “Starting date of the project will be date of request for registration. After registration of the project, the CPA owner will place order for the project lamps and that date will be considered as the start date of the project.” The same is inserted in section A.4.2.1 of the CPA-DD. Updated version of CPA-DD is version 3.	The starting date of the CPA has been revised to 02/08/2012 /02/. This is the date when the order for LED lamps was placed and invoiced was received from the manufacturer/16-1/. This can be treated as real action for CPA and is in line with the definition for start date from the Glossary of terms/B05/. A proof of payment/16-2/ has also been provided. CAR closed
CAR 5: The lifetime is not consistent with the information provided in sec A.2 of CPA-DD. It is not clear if the	G.4.2.2. / H.4.2.3	The lifetime of the CPA is 7 Years with renewable crediting period.	A phase-wise implementation schedule has been provided in section A.2 of CPA-DD. It

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<p>project implementation is for 2 years or 7 years. As, the project has chosen Option 1 from para 2 of the applied methodology, credits can be claimed only for 2 years and if there is any phase wise implementation, it is to be stated explicitly. Also, supporting documents are to be provided for the same.</p>		<p>Project has chosen Option 1 from para 11 of the applied methodology AMS.III.AR version 03, credits will be claimed only for 2 years and there is a phase wise implementation of the project. The phase wise implementation schedule is mentioned in section A.2 of the CPA-DD, version 2.</p>	<p>provides a clear understanding that for each of the lamps distributed credits will be claimed for 2 years only. However, the operational lifetime of CPA is 7 years based on phasewise implementation.</p> <p>CAR closed</p>
<p>CAR 6: Sec. B.2 of CPA-DD does not specify any justification with respect to the geographical boundary of the CPA.</p>	<p>H.2.1</p>	<p>The justification provided in the section A.4.6 of the CPA-DD has been revised and now is in line with the guidelines provided in EB 54, Annex 13, paragraph 10 (updated version of EB 47, Annex 32, paragraph 9).</p>	<p>Section B.2 of CPA-DD provides a clear justification of inclusion of CPA with respect to the geographical boundary of the CPA.</p> <p>CAR closed</p>
<p>CAR 7: The technical design specifications provided for the project lamps in the section A.4 of the CPA-DD is not in line with the design specification criteria mentioned under paragraph 5 of the applied methodology.</p>	<p>H.2.3</p>	<p>The technical design specifications has been revised in section A.4 of the CPA-DD version 2 and now is in line with the design specification criteria mentioned under paragraph 5 of the methodology AMS.III.AR, version 03.0.</p> <p>The technical design specifications have been now provided in section A.2 of the CPA-DD. The eligibility criteria has been provided in PoA for inclusion of a CPA as per following:</p> <ol style="list-style-type: none"> 1. Point (e) of the section A.4.2.2 of the PoA –DD states that “PA must meet the applicability criteria for methodology AMS.III.AR. Version 03.0, as mentioned in section E.2 of the PoA-DD.” 2. Point 3, 4 and 5 of the section E.2 of the PoA-DD states about the technical design specification of the CPA-DD. 3. Annex – 5 of the CPA-DD refers to the section E.2 of the PoA-DD. <p>In this way, the technical design specifications of the CPA-</p>	<p>Technical design specifications have been provided in section A.4 of revised version of CPA-DD/02/, also eligibility criteria has been provided in PoA for inclusion of a CPA with regards to the technical specifications.</p> <p>CAR closed</p>

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		DD are included in as an eligibility criteria in PoA for inclusion of CPA.	
		Updated version of CPA-DD and PoA-DD is version 3.	
CAR 8: In sec A.4.2.2 PP has not specified the eligibility criteria clearly in line with the applicable standards. Also, in the section B.2 of the CPA-DD, the PP has not explained the inclusion of CPA under the PoA by justifying the applicability under each eligibility criteria for inclusion of a SSC-CPA in the PoA in line with “Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities (version 01.0)” EB 65 Annex 3	H.2.3 / H.2.5 / H.2.6 / H.2.7 / H.2.8 / H.2.9 / H.2.10 / H.2.11 / H.2.12	The technical design specifications has been revised in section A.4 of the CPA-DD version 2 and now is in line with the design specification criteria mentioned under paragraph 5 of the methodology AMS.III.AR, version 03.0. Section B.2 of the CPA-DD has been updated and clear understanding on the eligibility criteria has been provided as per the following: <ol style="list-style-type: none"> 1. Pont (b) – Under Undertaking from CPA implementer has been provided with respect to any similar projects. Justification is also provided whether CDM/VCS websites have been reviewed for the same. 2. Point (d) – Point (d) has been shifted to point (e). Applicability criteria provided in Annex 5 has been revised and it is now in line with the applied methodology AMS-III.AR version 03. 3. Point (e) - Point (e) has been shifted to point (f). There are three eligibility criterias to become a CPA additional. The same are mentioned in section B.5.3 of the CPA-DD. The evidences regarding the same are Undertaking from CPA implementer and declaration from CME has been provided to DOE. 4. Point (f) - Point (f) has been shifted to point (h). The evidences regarding the same are Undertaking from CPA implementer and declaration from CME has been provided to DOE. 5. Point (g) - Point (g) has been shifted to point (i). The evidences regarding the same are Undertaking from CPA implementer and declaration from CME has been provided to DOE. Updated version of CPA-DD is version 3.	In section B.2 of CPA-DD PP has provided clear understanding on the eligibility criteria with the justifications and evidences for each of the eligibility criterion. CAR closed To confirm that the project lamps distributed through the project activity is no more than five per household or business location, sales record of the distribution of project lamps has not been provided. This shall be validated during verification. FAR 1 has been raised in this regard.

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<p>CAR 9: The data source, value, indication of accuracy is not correctly provided for parameter n_1.</p>	<p>H.6.1.6</p>	<p>The parameter n_1 refers to “Number of Project Lamps Distributed”. It has been revised to now N_{ij} for the better understanding. This parameter will be monitored during the project activity.</p> <p>The data source, value, indication of accuracy is correctly provided for parameter.</p>	<p>Parameter n_1 has been revised to N_{ij}. The data source, value, indication of accuracy is correctly provided for the parameter.</p> <p>CAR closed</p>
<p>CAR 10: Section D.2 of CPA-DD does not provide:</p> <ul style="list-style-type: none"> • Date of advertisement for local stakeholder consultation invitation. • Substantiate with evidences that a reasonable time for submission of comments was provided 	<p>J.1.1 / J.1.2</p>	<p>Section D.2 of the CPA-DD version 02 has been revised.</p> <ul style="list-style-type: none"> • Section D.1 includes the date of advertisement for local stakeholder consultation invitation. • It is mentioned in the summary in section D.4. <p>Evidence has been presented in the section D.2 of the CPA-DD for the statement “that maximum people in the villages do not but newspapers”. Exact dates and timeline have been provided for the stakeholder consultation.</p> <p>Updated version of CPA-DD is version 3.</p>	<p>Section D.2 states that maximum people in the villages do not buy newspapers. Also, it has been evidenced by providing description in the CPA-DD. Exact dates and timelines have been provided for the stakeholder consultation.</p> <p>CAR closed</p>
CLARIFICATION REQUEST			
<p>CL 1: PP is requested to provide the schedule of implementation plan for the LED lamps across India and evidence for the same.</p>	<p>G.2.2</p>	<p>Schedule of implementation plan for the LED lamps is provided in section A.2.</p>	<p>Schedule of implementation plan/19/ for the LED lamps across India has been provided clearly in section A.2 of CPA-DD.</p> <p>CL closed</p>
<p>CL 2: The PP needs to provide evidences / proofs which can demonstrate that the programme description is in compliance with the actual situation or planning to substantiate the same by providing the sales</p>	<p>G.2.4 / G.2.5 / G.2.6</p>	<p>Only after the registration of the PoA, the sales will take place. However, the actual situation will be in compliance with the programme description. There is an “Agreement for CPA Participation” signed between the CME and CPA</p>	<p>As the actual sale and distribution hasn’t taken place actual sales data is not available. The supporting document</p>

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agreement and other evidences.		<p>implementer. The same has been provided to DOE along with this response.</p> <p>Schedule 2 of the “Agreement for CPA Participation”, affirms the Commercial terms and generation schedule by which DOE can confirm that “the actual situation will be in compliance with the programme description”.</p>	<p>“Agreement for CPA Participation”/23/, has been provided to DOE for validation.</p> <p>CL closed</p>
<p>CL 3: PP needs to provide documentary evidences to substantiate that that the stated entity/individual is responsible for the implementation of the CPA.</p>	G.3.2.	<p>The “Agreement for CPA Participation” signed between CME and CPA implementer has been provided as documentary evidences to substantiate that that the stated entity/individual is responsible for the implementation of the CPA.</p>	<p>“Agreement for CPA Participation”/23/, signed between CME and CPA implementer clearly provides that Eureka Forbes Ltd India is the entity/individual responsible for the implementation of the CPA.</p> <p>CL closed</p>
<p>CL 4: The PP is requested to provide the documentary evidence to validate the area covered under this CPA.</p>	G.4.1.2 / H.4.1 / H.4.2 / H.4.4	<p>Schedule 3 of the “Agreement for CPA Participation” specifies the area covered under this CPA.</p>	<p>Schedule 3 of the “Agreement for CPA Participation”/23/ clearly provides the map of the project region as documentary evidence. This has been verified by validation team members.</p> <p>CL closed</p>
<p>CL 5: PP needs to demonstrate through suitable evidences how it can ensure the implementation of the project.</p>	G.4.1.4	<p>The CPA implementer will send monthly data for monitoring to the PP. All the terms and condition related to continuous monitoring has been mentioned in the “Agreement for CPA Participation”. This will ensure the implementation of the project.</p>	<p>Section 6 of “Agreement for CPA Participation”/23/ provides the guidelines with respect to monitoring line. This ensures that PP would be able to implement the project.</p> <p>CL closed</p>
CL 6:	G.4.4.1 /		

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<p>In section B.5.1 of the CPA-DD has used the values and calculations have been done in Annex 3. However:</p> <ul style="list-style-type: none"> • PP has used an average value of Fuel Use Rate (FUR) of 0.073 litres/hour for India. However this value is not consistent as the family size is taken as 5 but the reference used for the same, states that the family size of 5 is for rural and 4.5 for urban areas. No justification for the selection of the value for family size as 5 has been provided. • For the determination of parameter DB_y, PP has used an average value of 5% of annual real GDP growth in place of national growth rate of kerosene fuel use in lighting. PP needs to demonstrate the appropriateness, relevance of the data and also demonstrate how the value arrived at is conservative. • PP needs to substantiate the value of 0.3 used for parameter W_i, with documentary evidence. 	<p>H.5.2.1 / H.5.2.2 / H.5.3.1 / H.5.3.3 / H.5.3.5 / K.3.1 / K.3.2 / K.3.3 /</p>	<ul style="list-style-type: none"> • The target households in the CPA are mostly rural, so the family size of 5 is chosen. The same is amended in Annex-3 of the CPA-DD version 02. However, in the revised version of CPA-DD default value of the FUR was deemed appropriate and has been used for CER calculation • The value of DB_y has been revised to the default value provided by methodology. • The parameter W_i refers to the Wattage of the project lamps that will be distributed to end users. The parameter has been removed from the section B.5.1 and added in section B.6.1 with the Parameter $N_{i,j}$. It will be monitored. However, the value of W_i is 0.25 Watts. The certification from the manufacturer has been provided for the same. The target households in the CPA would be rural domestic households. The implementation plant and declaration from the CPA Implementer and CME has been provided for the same. The value of FUR has been revised to 0.030 litres/hour as mentioned in AMS.III.AR, version 03. 	<p>The values of FUR and DB_y have been revised to the default values provided by the methodology, AMS-III.AR, version 03/B02/.</p> <p>This is acceptable to the validation team.</p> <p>CL closed</p>
<p>CL 7: In the section A.4.5 of PP needs to justify and demonstrate by supporting documents that no ODA has been diverted in this project activity.</p>	<p>G.4.5.1 / K.2.1 / K.2.2 /</p>	<p>No ODA has been diverted in the project. This was discussed with the validator during validation site visit and the PP has submitted a self-declaration on no ODA utilization. the same has been mentioned in section A.4.5 of the CPA-DD version 02. The self-declaration from the CME and Undertaking from the CPA Implementer has been provided confirming that No ODA has been diverted in the project.</p>	<p>In section A.4.5 of revised version of CPA-DD/02/, it is stated that no ODA has been diverted in this project activity.</p> <p>Also, declarations have been provided by CME/08/ and CPA implementer/12/ confirming the same.</p> <p>CL closed</p>
<p>CL 8: PP needs to explain in detail about the reference numbering system used to identify each project lamp, which makes it so unique so as to prevent double</p>	<p>G.4.7.1 / G.4.7.2 /</p>	<p>As per the "SMALL-SCALE CDM PROGRAMME ACTIVITY DESIGN DOCUMENT FORM (CDM-SSC-CPA-DD) - Version 01" the section A.4.7 should contain information regarding confirmation that small-scale CPA is</p>	<p>Section A.4.7 of CPA-DD/02/ has been revised to indicate that small-scale CPA is neither</p>

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<p>counting.</p>		<p>neither registered as an individual CDM project activity or is part of another Registered PoA.</p> <p>The section A.4.7 of the CPA-DD, version 02 has been revised accordingly.</p> <p>Each project lamp shall be identified by the unique identification number of CPA.</p>	<p>registered as an individual CDM project activity or is part of another Registered PoA. Also the unique referencing system used for identifying project lamps has been described. Each project lamp shall be identified by the unique number of the CPA.</p> <p>CL closed</p>
<p>CL 9: In section B.6.1 of the CPA-DD, clarify:</p> <ul style="list-style-type: none"> Operational and management structure along with procedure for flow of information The procedure for monitoring, data collection, recording, checking, data transfer and archiving system for CPA and justify how it is consistent for all CPAs. 	<p>G.6.1.1. / G.6.1.2</p>	<p>Section B.6.1 of the CPA-DD version 02 has been revised and now it contains information on:</p> <ul style="list-style-type: none"> Operational and management structure along with procedure for flow of information the procedure for monitoring, data collection, recording, checking, data transfer and archiving system for CPA and justify how it is consistent for all CPAs. 	<p>Section B.6.1 has been updated to clearly provide:</p> <ul style="list-style-type: none"> Operational and management structure along with procedure for flow of information The procedure for monitoring, data collection, recording, checking, data transfer and archiving system for CPA and justify how it is consistent for all CPAs. <p>CL closed</p>
<p>CL 10: The PP is requested to explain the applicability of the following parameters mentioned in section B.6.1 of CPA-DD with respect to their applicability and requirement for emission reduction calculation which do not meet the parameters listed in E.7.1 of PoA-DD, Like:</p> <ul style="list-style-type: none"> n_0 	<p>H.6.1.3. / H.6.1.5. / H.6.1.10</p>	<p>Parameter n_0 was used from the version 02 of methodology, however the version of methodology AMS-III.AR, version 03 is being used and hence been excluded in line with the methodology.</p>	<p>Section B.6.1 has been revised to exclude n_0 from ex-ante parameters.</p> <p>CL closed</p>

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TABLE 3 FORWARD ACTION REQUEST

Forward action request	Reference to Table 2	Response by project participants Validation Conclusion
FAR 1: To confirm that the project lamps distributed through the project activity is no more than five per household or business location, sales record of the distribution of project lamps has not been provided. This shall be validated during verification.	H.2.5	CME and EFL confirm that the project lamps distributed through the project activity will be no more than five per household. Sales will only begin, once project is registered. Sales records will be managed in such a way that it can be proven at the time of verification. This shall be confirmed at the time of verification.

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APPENDIX B CERTIFICATE OF COMPETENCE



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