



POA VALIDATION REPORT

Barefoot Power Lighting Programme

24 July 2012

Japan Consulting Institute

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CDM Validation Report for Barefoot Power Lighting Programme

Date of issue	Report Number
25 April 2012	JCI-CDM-VAL-11/037
Confirmed by Akio YOSHIDA Executive Director	Organizational Unit JCI CDM Center, Japan Consulting Institute (JCI)
Client Barefoot Power Pty Limited	Client ref., Mr. Harry Andrews
Project name	Barefoot Power Lighting Programme
Host Country Republic of Kenya	Methodology version AMS-III.AR. (Version 1)
Size Small Scale	ER estimate 9,749 t-CO ₂ e/year (average CPA-SSK-KE-01)
A summary of the validation process and its conclusions, validation opinion <p>Japan Consulting Institute (JCI) has performed a validation work of the small-scale CDM Program of Activities (PoA) with the title “Barefoot Power Lighting Programme” in Kenya (hereafter called “the Project”) under the act of the Coordinating / Managing Entity (CME) ,”Barefoot Power Pty Limited”. This report summarizes the findings of the validation of the Project, the PoA small-scale CDM programme activities design document (CDM-SSC-PoA-DD) with generic information relevant to all CDM programme activities (CPAs) and one completed CDM-SSC-CPA-DD-KE-01 for Barefoot Power Lighting Programme SSK-KE-01 in Kenya (hereafter called “BFP SSK-KE-01”) to be included under this PoA project.</p> <p>The validation has been performed based on the UNFCCC criteria for PoA under the Clean Development Mechanism and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.</p> <ul style="list-style-type: none"> • The review of the SSC-PoA-DD, the generic SSC-CPA-DD and the one real case SSC-CPA-DD-KE-01 (hereafter referred to “the DDs”) and the subsequent follow-up interviews including the CME have provided JCI with evidences to determine the fulfilment of the stated criteria. • The host country is Republic of Kenya (hereafter referred to “Kenya”), and Annex I country is not determined at present (uni-lateral condition). • The project applied “AMS-III.AR. TYPE III - Other Project Activities – Substituting fossil fuel based lighting with LED lighting systems (version 01)”, and the relevant Standards and Guidelines. • The total emission reductions from the BFP-SSK-KE-01 are estimated to be on the average 9,749 t-CO₂e per year over the 10 years’ crediting period under the PoA (Barefoot Power Lighting Programme) with the 28 years’ crediting period. • It is JCI’s opinion that the PoA as described in the CDM-SSC-PoA-DD version 07 and the DDs of the “Barefoot Power Lighting Programme” meets relevant UNFCCC requirements for the PoA and relevant host country criteria and correctly applies the methodology ASM-III.AR. version 01. 	

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24 July 2012 For Revision 02	
Checked by Hideyuki Sato, Manager, Evaluation Group, JCI CDM Center	
Reviewed by Hideyuki Sato, Technical reviewer	
Work carried out by Takayuki Abe, Haruo Sawada	

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Abbreviations

BFP	Barefoot Power Pty Limited (the CME for the proposed PoA Project)
BFP SSK-KE-01	“Barefoot Power Lighting Programme SSK-KE-01”, the 1st CPA in Kenya under the PoA Project, “Barefoot Power Lighting Programme”
CAR	Corrective Action Request
CL	Clarification Request
CDM	Clean Development Mechanism
PoA-DD	Small-Scale CDM PoA Design Document for “Barefoot Power Lighting Programme”
CPA-DD-KE-01	Small-Scale CDM PoA Design Document for Barefoot Power Lighting Programme SSK-KE-01, operated by Smart solar Kenya Limited in Kenya as the 1st entity for CPAs
CEF	Carbon Emission Factor
CERs	Certified Emission Reductions
CME	Coordinating and Managing Entity
CO ₂	Carbon dioxide
CPA	CDM Programme Activity
DD	Design Document
DDs	PoA-DD, generic-CPA-DD, and the 1 st real CPA-DD-KE-01
DOE	Designated Operation Entity
DNA	Designated National Authority
ERPA	Emission Reduction Purchase Agreement
ERs	Emissions Reductions
EB	The CDM Executive Board under COP/MOP
EIA	Environment Impact Analysis
GHG	Greenhouse Gas
JCI	Japan Consulting Institute
Kenya	Republic of Kenya
KP	Kyoto Protocol
LoA	Letter of Approval
PP	Project Participants
SSK	Smart solar Kenya Limited (1 st CPA entity in Kenya)
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Clean Development Mechanism Validation and Verification Manual

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I. VALIDATION SUMMARY AND OPINION

Japan Consulting Institute (JCI) has performed a validation of the small-scale CDM Program Activities (PoA) with the title “Barefoot Power Lighting Programme “ (hereafter called “the Project”) to replace kerosene lamps with solar LED Lamps, in Kenya, under the activity of the Coordinating / Managing Entity (CME) ,”Barefoot Power Pty Limited.” (hereafter called “BFP”,or “the CME”) The validation was performed on the basis of UNFCCC criteria for the Clean Development Mechanism and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The reviews of the design documentation and the subsequent follow-up interviews have provided JCI with evidences to determine the fulfillment of the stated criteria.

The host country country is Republic of Kenya (hereafter referred to “Kenya”) , the project participant of Annex I country of the Project is not determined at present.(uni-lateral condition). The host country fulfilled the participation criteria.

The Project applied “AMS-III.AR. Substituting fossil fuel based lighting with LED lighting systems, version 01.”

The total emission reductions from the BFP-SSK-KE-01 were estimated to be the **average 9,749 t-CO₂e per year** over the 10 years’ crediting period for the BFP-SSK-KE-01 in Kenya, one of the real component project activities (CPA) under the proposed PoA with the 28 years’ crediting period. The estimated emission reductions has been checked based on the validation work and JCI considered all relevant assumptions for the above estimated emission reduction was accurate and appropriate.

In summary, it is JCI’s validation conclusion that the Project as described in the latest version of the DDs which include CDM-SSC-PoA-DD, the generic CPA-DD and specific real case of CDM-SSC-CPA-DD-KE-01 (for one CPA, BFP-SSK-KE-01) meets all relevant UNFCCC requirements for PoA and all relevant host country criteria and currently applied the baseline and monitoring methodology AMS-III.AR. “Substituting fossil fuel based lighting with LED lighting systems” (version 01).

JCI thus provides a positive validation opinion and the requests for the registration of the Project as a PoA.

II. INTRODUCTION OF POA VALIDATION

Barefoot Power Pty Limited (hereafter referred to “BFP”) has commissioned JCI to perform a

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validation of the Project. This report summarizes the findings of the validation of the Project performed on the basis of CDM VVM version 01.2, and related UNFCCC criteria for the PoA, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM modalities and procedures and the subsequent decisions by the CDM Executive Board.

1. Objective of CDM Validation

The purpose of validation is to ensure a thorough, independent assessment of proposed project activities submitted for registration as a proposed PoA project activity against the applicable PoA requirements.

JCI reports the results of its assessment in a validation report. JCI submits this validation report, along with the supporting documents to the CDM Executive Board as part of the request for registration of PoA.

The validation report includes a positive validation opinion as the Project activity complies with the applicable PoA requirements.

2. Validation approach

The CDM is a rules-based mechanism. Therefore, it is the JCI's responsibility to ensure that, in accordance with the Validation and Verification Manual version 01.2 and PoA requirements, these rules are complied with for any project activities requesting registration as a proposed PoA project activity.

During validation, the JCI assesses whether the project design of the proposed PoA project activity meets the all relevant requirements. For this, JCI, using objective evidence, assesses the completeness and accuracy of the claims and conservativeness of the assumptions made in the design documents (DDs) of the PoA. The evidence used in this assessment is not limited to that provided by the project participant (the CME or BFP).

In assessing evidence, JCI does not omit evidence that is likely to alter the validation opinion. In the assessment of evidences, JCI uses the acceptable approaches as specified in section II to IV, below, and JCI ensures that the project activity complies with the relevant requirements set out in the CDM modalities and procedures, the applicability conditions of the selected methodology and guidance issued by the CDM Executive Board before submitting a request for registration.

In case the validation report includes a negative validation opinion, the validation report is sent to the CDM Executive Board.

3. VALIDATION METHODS

3.1 Means of validation

JCI applies standard auditing techniques to assess the correctness of the information provided by the project participants, including, where appropriate, but not limited to:

- (a) Document review, involving:
 - (i) Review of data and information to verify the correctness, credibility and interpretation of presented information;
 - (ii) Cross checks between information provided in the DDs and information from sources other than that used, if available, and if necessary independent background investigations
- (b) Follow-up actions (e.g., on site visit and telephone or email interviews), including:
 - (i) Interviews with relevant stakeholders in the host country, personnel with knowledge of the project design and implementation;
 - (ii) Cross-check of information provided by interviewed personnel (i.e. by checking sources or other interviews) to ensure that no relevant information has been omitted from the validation;
- (c) Reference to available information relating to projects or technologies similar to the proposed CDM project activity under validation; and
- (d) Review, based on the approved methodology being applied, of the appropriateness of formulae and correctness of calculations.

3.2 Clarification requests, corrective action requests and forward action requests

If, during the validation of a project activity, JCI identifies issues that need to be further elaborated upon, researched or added to in order to confirm that the project activity meets the CDM requirements and can achieve credible emission reductions, JCI ensures that these issues are correctly identified, discussed and concluded in the validation report.

JCI raises a corrective action request (CAR) if one of the following occurs:

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

JCI raises a clarification request (CL) if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

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JCI raises a forward action request (FAR) during validation to highlight issues related to project implementation that require review during the first verification of the project activity. FARs shall not relate to the CDM requirements for registration.

JCI resolves or “close out” CARs and CLs only if the project participants modify the project design, rectify the DDs or provide adequate additional explanations or evidence that satisfies the DOE’s concerns. If this is not done, JCI does not recommend the project activity for registration to the CDM Executive Board.

JCI reports on all CARs, CLs and FARs in its validation report. This reporting is undertaken in a transparent and unambiguous manner that allows the reader to understand the nature of the issue raised, the nature of the responses provided by the project participants, the means of validation of such responses and clear reference to any resulting changes in the DDs of the PoA or supporting annexes.

The validation protocol consists of two tables. The different columns in these tables are described as followings.

Validation protocol tables

Table 1: Requirements checklist

✧ **Requirement (Checklist Question) :**

The various requirements in Table 1 are checklist questions the project should meet. The checklist is organised in different sections, following the logic of the latest VVM, the PDD Guidelines and the large-scale PDD template, version 03 - in effect as of: 28 July 2006. Each section is then further sub-divided.

✧ **Reference :**

Gives reference to documents where the checklist question or item is found. Paragraph No. of VVM is referred.

✧ **Check Comment :**

The column is used to elaborate and discuss the checklist question and/or the conformance to the question.

✧ **ID No. of CAR, CL and FAR :**

- *ID No. of CAR, CL and FAR is described.*
- *Corrective Action Request (CAR) is used due to non-compliance with the checklist question.*
- *Clarification Request (CL) is used when the validation team has identified a need for further clarification.*
- *Forward Action Request (FAR) is used to highlight issues related to project implementation that require review during the first verification of the project activity.*

Table 2: Resolution of Corrective Action and Clarification Requests

✧ **Clarifications and corrective action requests :**

If the conclusions from the draft Validation are either a CAR, a CL or a FAR, these should be listed in this section.

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Table 2: Resolution of Corrective Action and Clarification Requests

- ✧ **Ref. to checklist question in Table1 :**
Reference to the checklist question number in Table1 where the CAR, CL or FAR is explained.
- ✧ **Summary of project owner response :**
The responses given by the project participants during the communications with the validation team should be summarised in this section.
- ✧ **Validation team conclusion :**
This section should summarise the validation team's responses and final conclusions.

The completed validation protocol for the Project will be enclosed in Appendix A to this report when the report is completed.

4. STAKEHOLDER CONSULTATION PROCESS

JCI makes all DDs of the PoA under consideration publicly available in accordance with the latest version of the “Procedures for Processing and Reporting on Validation of CDM Project Activities”^{*1}.

^{*1} <http://cdm.unfccc.int/Reference/Procedures/valid_proc02.pdf>.

During the validation of the project activity, JCI takes into account the comments received and the validation report shall include details of actions taken to take due account of the comments during the validation process.

If comments are not sufficiently substantiated or indicate that the project activity does not comply with the CDM requirements, then JCI requests further clarification from the entity providing the comment. However, JCI is not required to enter into a dialogue with Parties, stakeholders or NGOs that comment on the CDM requirements. If no additional information or substantiation is provided in response to a request for clarification, JCI proceeds to assess the comments as originally provided.

III. VALIDATION WORK

JCI carried out the validation work to ensure that the project activity complies with the requirements of paragraph 37 of the CDM modalities and procedures.

1. Validation Team

Details of the validation team are shown in below Table III.1.

Table 1-a Details of Validation Team members

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Role/Qualification	Name	Qualified Technical Areas related to the Project	On-site Visit
All relevant issues / Team Leader	Takayuki Abe	(TA1.2) Energy generation from renewable energy sources	-
CDM auditor / Team Member	Haruo Sawada	(TA1.2) Energy generation from renewable energy sources	✓ -

Details of the technical reviewer are shown in below Table III.1-b.

Table 1-b Technical Reviewer

Name	Qualified Technical Areas related to the Project
Hedeyuki Sato	(TA1.2) Energy generation from renewable energy sources

2. Appointment certificate of JCI validation team member

The certificate of appointment of validation team member will be attached in Appendix B to this report.

3. Quality Control within the team of the Validation Process

The validation report worked out by the team underwent an internal review process to ensure the compliance with the applicable requirement of VVM.

JCI applies internally established Quality Management Program for the required review process, which is defined as follows;

1. Internal Review for the interim check by the internal audit team and the interim technical review by the technical reviewer
2. The evaluation of the validation work in the CDM evaluation committee consists of outside experts
3. Internal review for the final check by internal audit team and the final technical review by the technical reviewer

The review and evaluation including the technical review are implemented for every validation work by the competent personnel assigned in accordance with JCI's qualification scheme for CDM validation and verification.

4. Desk Review

4.1 Document review

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The CDM-SSC-PoA-DD, the generic CDM-SSC-CPA-DD and the specific CDM-SSC-CPA-KE-01 (hereafter referred to “the DDs”) were submitted to JCI firstly in August 2011 and their subsequent revisions have been reviewed. The additional evidences and information related to the PoA have been reviewed to verify the correctness, credibility and interpretation of the presented information. Furthermore, a cross-check between provided information and information from other sources has been done as an initial step of the validation process. A complete document list of all documents and evidence material is shown in below Table 2.

4.2 Document list

All the relevant documentation to be reviewed through the whole validation process is listed in tabular form in the following table (**Table 2**) :

Table 2. : Document list

No.	Title
1.	<DDs for POA and CPA, ERs Spread sheet >
1.1	CDM-SSC-PoA-DD version 01, 17/08/2011 for GSC
1.2	CDM-SSC-PoA-DD version 07, 24/07/2012
1.3	CDM-SSC-CPA-DD version 01, 17/08/2011 (generic CPA) for GSC
1.4	CDM-SSC-CPA-DD version 04, 24/07/2012 (generic CPA)
1.5	CDM-SSC-CPA-DD-KE-01 version 01, 17/08/2011 (for CPA- BFP SSK-KE-01) for GSC
1.6	CDM-SSC-CPA-DD-KE-01 version 06, 24/07/2012 (for CPA- BFP SSK-KE-01)
1.8	ERs Spread sheet for CPA- BFP SSK-KE-01,Version04 10/07/2012
2.	<Letters of Approval>
2.1	LoA (Letter of Approval) for the Project by DNA of Kenya, 23/04/2012
2.3	Letter of Affirmation about “No-diversion of ODA Fund to the financial obligations of CDM Project” by European Commission EuropeAid dated 06/03/2012
2.	<Outline of the related entities >
2.5	Certificate for Registration to Barefoot Power Pty Limited by Australian Securities and Investment Commission dated 20/01/2005
2.6	Single Business Permit to SMART SOLAR (K) LTD. issued by Nairobi City Council dated 20/01/2011.
2.6.2	Certificate of Incorporation to SMART SOLAR (KENYA) LIMITED as a LIMITED dated 15/09/2009
3.	<Referenced Documents (Methodology, Guidance, Criteria, etc. of UNFCCC)>
3.1	CDM Validation and Verification Manual (VVM) (Version 01.2), EB55 Annex 01
3.2	Approved Methodology “Substituting fossil fuel based lighting with LED lighting systems” (version 01)
3.3	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
3.4	“Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities” (Version 02.0), EB 65, Annex2

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No.	Title
3.5	Guidelines on the Demonstration of Additionality of Small-Scale Project Activities (Version 09.0) ,EB68 Annex 27
3.6	General Guidelines for SSC CDM methodologies (version 17)
3.7	Guidelines for Objective Demonstration and Assessment of Barriers (Version 01)
3.8	Guidelines for Demonstrating Additinoality of Microscale Project Activities (Version 04.0), EB68 Annex 26
3.9	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), EB55 Annex 38
3.10	Glossary of CDM terms (Version 06.0)
3.11	Annex : Modalities and procedures for a clean development mechanism ” as defined in Article 12 of the Kyoto Protocol
3.12	Guidelines on Assessment of Debundling for SSC Project Activities (version 03), EB54 Annex 13
3.14	Guidelines on Completeness Check of Request for Registration” (EB48 Annex 60)
3.15	The response by SSC WG36 to a request for clarification (SSC 609) dated 23/03/2012
4.	< Local Codes, Regulations, General references related to the Project>
4.1	Kenya Environmental Management Coordination Act. 1999 No.8.
4.2	Kenya Environmental Management and Co-ordination (Waste Management) Regulations, 2006.
4.5	Quality Inspection of Imports Order (1998) by the Kenya Bureau of Standards. http://www.kenyalaw.org/kenyalaw/klr_app/frames.php
5.	< Published references >
5.1	Market quantitative assessment on various illumination devices including LED light and kerosene lamps – Kenya, by <i>Lighting Africa</i> (2008)
5.2	Kenya Integrated Household Budget Survey (KIHBS) 2005/2006 Basic Report by Minister for Planning and National Development
5.3	Leading Economic Indicators by Kenya National Bureau of Statistics (August 2011)
5.4	Qualitative off-grid lighting market assessment - Kenya , by <i>Lighting Africa</i> (2008 Oct.)
5.5	Productive uses of energy for rural development , by Cabraal et al.,by <i>Ann.Rev.Envirn.Resour.</i> 30(p117) (2005)
5.6	Solar Lighting for the Base of Pyramid - Overview of an Emerging Market, by <i>Lighting Africa</i> (2010)
5.7	Solar Lantern Test (world-wide comparison) by <i>German Gesellschaft for Technische Zusammenarbeit (GTZ) GmbH</i> , (2009 March)
5.8	Lumina Project - Technical Report 6 (June 21,2010)
5.9	Research on Solar home system market and LED product quality in Kenya, <i>EnergyPolicy_30</i> (p477) (2002)
5.10	Off- grid Lighting in Kenya
5.10.2	Flashlight_Report_ by <i>Lighting Africa_05/02/2010</i>
5.11	Lumina Project –research note #4-torches (Sep.14,2009)

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No.	Title
5.12	<i>Lighting Africa</i> Annual Report FY2009/2010
5.13	Assessment of the solar micro franchises to solar market report by <i>GTZ</i> (2009)
5.14	A five-year review of burn injuries in Nigeria by Dongo et al. by <i>BMC Health Services Research</i> , 7 (p171)(2007)
5.15	Research on particulate matter from kerosene lamps, by <i>Indoor Air</i> 20(p399) (2010)
5.16	2009 Kenya Population and Housing Census by Kenya National Bureau of Statistics (2010)
6.	< Contracts, Agreements for Project>
6.1	Minutes of Understanding on the batteries disposal between Barefoot Power Ltd. and the licensed disposer (EAST AFRICAN COMPUTER RECYCLING), signed 18/11/2011
6.2	An example of import certificates of the project lamps issued by Kenya Bureau of Standards dated 21/10/2011
6.3	Contractual Agreement between CME and SSK on CDM Project Agreement on 10/07/2012
7.	< Documentary evidences, Records for the Project >
7.1	An example copy of the stakeholders' opinion held at YMCA Central Hostel in Nairobi dated 25/03/2011
7.2	The local stakeholders' consultation summary report held at YMCA Central Hostel in Nairobi dated 25/03/2011
7.3	The loan agreement between the bank and Barefoot Power Ltd in 2011 (as an extract from the signed convertible debt term sheet)
7.4	Annual Capital Amount of BFP
7.6	Market price comparison of LED Lamps in Kenya, by BFP (2011)
7.8	The test_procedure_by Lighting Africa Quality Test Method _v.2.01_2011-02-22
7.9	LED_Lighting_Test Procedures_Draft_FISE_Aug09
7.10	Preliminary end-users survey of the project lamps in Uganda dated 02/04/2012
7.11	BFP products Quality test result including LED degradation over 10,000hrs (2011)
7.13	BFP Gen2.5 Prod Mix and Pricing v5.3 Final June 2011
7.14	BFP Record Keeping and Project Monitoring Manual compiled dated 06/12/2011
7.14.2	BFP Record Keeping and Project Monitoring Manual Version 3 compiled dated 09/07/2012
7.15	JCI on-site assessment report dated 26/11/2011
7.16	The first sales invoice of the project lamps in Kenya dated 09/12/2011
7.17	Confirmation Letter by SSK on no public funding from Annex I countries dated 09/01/2011
7.20	The manufacturer certification for the one project lamp type "Firefly Mobile" issued by Operations Director for the products
7.21	The manufacturer certification for the one project lamp type "PowerPack Junior Matrix" issued by Operations Director for the products
7.22	The manufacturer certification for the one project lamp type "PowerPack 5W" issued by Operations Director for the products
7.23	Lighting Africa Product Testing Verification for Barefoot "Firefly Mobile" dated July 2012
7.24	Lighting Africa Product Testing Verification for Barefoot "PowerPack Junior Matrix" dated July 2012
7.25	Lighting Africa Product Testing Verification for Barefoot "PowerPack 5W" dated July 2012

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5. Follow-up actions (e.g., Onsite visit, Interviews with Project Stakeholders)

The on-site assessment and interviews with project stakeholders were held from 22 to 26 November 2011 at Nairobi Kenya and Kampala Uganda.

The names of interviewees and topics are listed in following Table 3.

Table 3. List of interviewees

Date / Place	Name	Organization	Topic
22/11/2011 Nairobi, in Kenya	<ul style="list-style-type: none"> Mr. Andrew Barson (Project Manager) Mr. Adriaan Tas (Director) , Mr. Matthew Woods (Director), Ms. Maryanne Maina (Project Officer) 	<ul style="list-style-type: none"> Barefoot Power Pty Limited (BFP) (the CME) Carbon Africa Limited (CAL) (The carbon consultant and PoA-DDs Author) 	<p><u>Interview with CME, Carbon consultant</u></p> <ul style="list-style-type: none"> Company profile and Scheme of Project Management of CME and Eligibility Criteria Additionality of PoA/CPAs Technical feature /Monitoring plan Review of documentary evidences Initial Findings Review
23/11/2011 Nairobi, in Kenya	<ul style="list-style-type: none"> Mr. Andrew Barson (Project Manager) Mr. Boldewijn Sloet (Managing Director) Mr. Adriaan Tas (Director) , Mr. Matthew Woods (Director), Ms. Maryanne Maina (Project Officer) 	<ul style="list-style-type: none"> Barefoot Power Pty Limited (BFP) (the CME) SSK (CPA Kenya) Carbon Africa Limited (CAL) (The carbon consultant and PoA-DDs Author) 	<p><u>Interview with CME, CPA Kenya, Carbon consultant</u></p> <ul style="list-style-type: none"> Business scheme of CPA Technical feature /Monitoring plan Environmental aspect Review of stakeholders comments
24/11/2011 Kampala, in Uganda	<ul style="list-style-type: none"> Mr. Andrew Barson (Project Manager) Mr. Dirk Kam (Managing Director) Mr. Adriaan Tas (Director) , Mr. Carlos Guerrero (Project Officer) 	<ul style="list-style-type: none"> Barefoot Power Pty Limited (BFP) (the CME) BFP (CPA Uganda) Carbon Africa Limited (CAL) (The carbon consultant and PoA-DDs Author) 	<p><u>Interview with CME, CPA Uganda, Carbon consultant</u></p> <ul style="list-style-type: none"> Business scheme of CPA Technical feature /Monitoring plan Environmental aspect Review of stakeholders comments
23/11/2011 Naai Mahiu Town, in Kenya	<ul style="list-style-type: none"> Four end user families and one LED shop in local town 	<ul style="list-style-type: none"> Farmers / Chicken farm / Political refugee /Shop keeper 	<p><u>Interview with Local stakeholders, Kenya</u></p> <ul style="list-style-type: none"> Meeting with local stakeholders and participants in the marketing

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Date / Place	Name	Organization	Topic
25/11/2011 Mukono district, in Uganda	· Two end user families in local villages and dealers and sales managers at BFPU office	· Farmers / Sales persons	<u>Interview with Local stakeholders, Uganda</u> · Meeting with local stakeholders and participants in the marketing
26/11/2011 Kampala, in Uganda	· Mr. Andrew Barson (Project Manager) · Mr. Adriaan Tas (Director) , Mr.Carlos Guerrero (Project Officer)	· Barefoot Power Pty Limited (BFP) (the CME) · Carbon Africa Limited (CAL) (The carbon consultant and PoA-DDs Author)	<u>Meeting with CME, Carbon Consultant</u> · Closing meeting

IV. VALIDATION FINDINGS

The findings of the validation are stated in the following sections. The basic information of the Project, which included the final version of the DDs (the CDM-SSC-PoA-DD, the generic CDM-SSC-CPA-DD and the specific CDM-SSC-CPA-SSK-(KE)) has been validated. The validation criteria (requirements), the means of validation and the results from the validation process are identified and documented in more detail in the validation protocol in Appendix A.

JCI issued six (6) CARs, fourteen (14) CLs and two (2) FARs as shown in the Validation Protocol, Appendix A of this report.

Process of resolution of the CARs and CLs are described in the Table 2 of the Appendix A, Validation Protocol.

Main changes between the first version of the DDs published for the 30 days stakeholders commenting period and the final version of the DDs submitted for registration, are listed below Table 4.:

Table 4. Major Changes in the Content of the DDs

Subject and section in the DDs	Original content in the DDs /1.1//1.3//1.5/	Revised content in the DDs/1.2//1.4//1.6/	Issued CAR or CL Relevant methodology, tool, guidance, or guidelines applied
LoAs <u>PoA-DD A.3.</u>	Both LoAs of Host countries (Kenya and Uganda) and Annex I country were not issued yet	The Host country was changed to Kenya only (LoA was issued) Annex I country was not determined (unilateral condition)	CAR-1, CAR-2, FAR-1 Para 45, 47,52,126 of VVM
Affirmation letter of No-diversion of ODA fund	Affirmation letter was not issued	Affirmation Letter was issued	CAR-4 PDD Guidelines ver.07. Para.14.of the Standard /3.3/

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Physical location <u>PoA-DD A.4.1.</u>	The PoA planned to implement both in Kenya and Uganda	The project participant has decided to implement only in Kenya first, then PoA-DD was appropriately revised.	CL-1 Para.78 of VVM
ERs calculation <u>CPA-DD B.5.</u>	Clarification on applied parameter values (Annual average 40,325 t/y)	Project lamp types and their technical parameters (including useful life) have been adequately revised, then Annual average 9,749 t/y)	CAR-5, CL-4 Methodology /3.2/, and Para.90 91 of VVM
Applicability of Standards and Guidelines <u>PoA-DD A.4.2.2 / CPA-DD B.2. & PoA-DD A.4.4.2. , E.7.2. / CPA-DD B.6.1.</u>	After the DDs for GSC, the two new Standards were introduced	Eligibility Criteria for inclusion of CPA, and Monitoring plan were appropriately revised by applying the two new Standards. Guidelines were updated.	CAR-6, CL-10 Para 165 of VVM <i>Standard for demonstration of additionality, development of eligibility criteria (EB65 Ann.3), and Standard for sampling and surveys (EB65 Ann.2)</i>
Sampling size for ex-post monitoring survey <u>PoA-DD A.4.4.2. , E.7.2. / CPA-DD B.6.1.</u>	Sampling size was determined as 125	Sampling size equation was adequately applied according to <i>Standard for sampling and surveys</i> , thus Sampling size was revised to 420	CAR-6, CL-10 Para 165 of VVM Methodology /3.2/
Project start date <u>CPA-DD A.4.2.</u>	The date at CPA-DD A.4.2. was before the date for GSC	The date was appropriately revised to 09/12/2011 confirmed with its invoice	CL-3 Para 99 of VVM

1. Approval

JCI issued CAR-1, and CAR-2 for request on the LoA of the host country.

JCI have received a copy of the Letter of Approval (LoA) from DNA of host country, Kenya, for the entity responsible for the CDM PoA project, Barefoot Power Pty Limited, with confirmation of approval on the proposed CDM project, Barefoot Power Lighting Programme.

JCI also has confirmed the following:

JCI has received the Letter of Approvals from the project participant, Barefoot Power Pty Limited, with clearly referencing the letter itself and any supporting documentation;

- DNA of Kenya issued LoA dated 23 April 2012.

2. Participation

JCI has acknowledged that the LoA of Republic of Kenya confirms the followings;

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Republic of Kenya has ratified the Kyoto Protocol on 25 February 2005

- (a) The Government of Kenya is a Party to the Kyoto Protocol and Participation in CDM project activities is voluntary
- (b) The proposed PoA project activity contributes to the sustainable development of Republic of Kenya, host country
- (c) It refers to the precise proposed PoA project activity title in the SSC-PoA-DD being submitted for registration, and Barefoot Power Pty Limited is the entity responsible for implementing the PoA.

During the validation period, the project participant, Barefoot Power Pty Limited, has decided the proposed PoA would be implemented only in Kenya first, although the Project planned to implement both in Kenya and Uganda as host countries at the time of submission of the DDs to UNFCCC.

JCI has raised CL-1 to revise the PoA-DD and its revision /1.2/ was confirmed to be appropriately corrected.

As the project participant, Barefoot Power Pty Limited did not intend to make a contract with a CER buyer before the request for registration of the proposed project, JCI has raised FAR-1 that a LoA by Annex-I country is to be submitted to EB before request for issuance of CER, to comply with the guidelines by EB 18 report Para.57.

JCI confirmed that “Barefoot Power Pty Limited ” is the sole project participant of Kenya, as being listed in tabular form in section A.3 of the PoA-DD/1.2/. It is also confirmed that no entities other than those approved as the project participant are included in these sections of the PoA-DD/1.2/.

As described above, the project participant, was authorized with the LoA issued by the relevant DNA as a responsible entity for the PoA project activity.

3. Project Design Document

Through desk reviews and Q&A sessions with the project participant, JCI confirmed that the DDs are described based on and referring to the following relevant methodology, guidance, guidelines, and manual:

- (1) Standard for Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple Methodologies for Programme of Activities (Version 01.0, Annex 3, EB 65)
- (2) Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities (Version 02.0, EB 65, Annex2)

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- (3) AMS-III.AR. “Substituting Fossil Fuel Based Lighting with LED Lighting Systems” version 01.
- (4) 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, EB55 Annex 38)
- (5) General Guidelines to SSC CDM methodologies (version 17)
- (6) Guidelines on the Demonstration of Additionality of Small-Scale Project Activities (Version 09.0), EB68 Annex 27
- (7) Guidelines for Demonstrating Additinoality of Microscale Project Activities (Version 04.0), EB68 Annex 26
- (8) CDM Validation and Verification Manual (VVM) (Version 01.2.)
- (9) Glossary of CDM terms (Version 06.0)
- (10) Guidelines on Assessment of Debundling for SSC Project Activities version 03.
- (11) Guidelines for Objective Demonstration and Assessment of Barriers (version 01)
- (12) And the related information

The project design was described using the appropriate template (CDM-SSC-PoA-DD Version 01 and CDM-SSC-CPA-DD Version 01) as shown in the DDs, that were confirmed through comparison with the template listed on the UNFCCC website.

As described above, JCI judged that the DDs (CDM-SSC-PoA-DD, generic CDM-SSC-CPA-DD and specific CDM-SSC-CPA-DD-KE-01) are compiled with the appropriate format and are described based on appropriate tools, guidelines, manual and guidance which are specified and requested by the PoA procedures.

4. Project Description

JCI conducted on-site assessment from 22 through 26 November 2011 to confirm the context of the DDs with the following measures:

- 1) Observation of the project site
- 2) Cross-check of the project design work with relevant documents provided by the project participants
- 3) Interviews with the project participant (Coordinating/Managing Entity; Barefoot Power Pty Limited), the carbon consultant and DDs Author (Carbon Africa Limited (hereafter referred to “CAL”), and relevant organizations/entities, and local stakeholders shown in Table 3 of section 5 of the previous Chapter III.

As the result of the above observations and findings and through the clarifications of descriptions of the DDs after the on-site assessment, JCI judged that the descriptions of the DDs were correct

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and its context was sufficient, and well outlined the nature and technical aspects of the project activity.

The technical aspects of the project activity described both at section A.4.2.1. of CDM-SSC-PoA-DD/1.2/ and section A.2. of CDM-SSC-CPA-DD-KE-01/1.6/ were cross-checked with the published information /5.9//5.6//5.4/.

The contribution to sustainable development in the Host country by the proposed PoA project was covered at section A.2. of CDM-SSC-CPA-DD-KE-01/1.6/, which JCI cross-checked with the published information /5.1//5.6//5.5//5.14//5.15/, and confirmed its income generation, impact on household expenditure, education, health and safety impact in addition to GHG reduction.

The major features of the project activity described in the document, CDM-SSC-PoA-DD , generic SSC-CPA-DD and CDM-SSC-CPA-DD-KE-01 for the first specific CPA (the project title : Barefoot Power Lighting Programme SSK-KE-01) are summarized below:

- Project type : Sale of the LED lamps with photovoltaic system to replace kerosene lamps in households and small and medium enterprises across Kenya.
- Coordinating Managing Entity (CME) : Barefoot Power Pty Limited
- CPA Entities : Smart Solar Kenya Limited (SSK) for the 1st CPA as BFP SSK-KE-01.
- Project Start date : 09/December/2012 for the 1st CPA as BFP SSK-KE-01
- **The project lamps : 3 Types and 7 Items of project lamps**
- Kerosene fuel use rate : 0.025 liter/hour/lamp (Default value)
- Baseline Emission-factor : to be verified for each CPA
- Rated lamp life of project lamps: at least 5,000 hours
- Estimated annual averaged ERs: **9,749 t-CO₂e/year for the 1st CPA, BFP SSK-KE-01**
- Crediting period : Fixed crediting period 10 years for the 1st CPA, BFP SSK-KE-01
Length of the PoA project is 28 years.

5. Eligibility Criteria for CPA Inclusion

JCI assessed the specified eligibility criteria in the PoA to determine those criteria are sufficient to ensure that all CPAs would comply with CDM requirements applicable to the PoA.

The CME demonstrated the specified criteria for the inclusion of CPA in the section A.4.2.2. of the PoA-DD /1.2/. , as shown below Table 5.

JCI assessed the demonstration by the CME about the criteria, **and noted DOE's justification at the foot line of each corresponding item of Table 5.**, through *Standard for Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple Methodologies for Programme of Activities (Version 01.0, Annex 3, EB 65)* (**hereafter called the Standard**), and

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AMS-III.AR. “Substituting Fossil Fuel Based Lighting with LED Lighting Systems”(version 01), (hereafter called the Methodology), 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, EB55 Annex 38).

Table 5. Eligibility Criteria Check

#	Eligibility criteria noted by CME at PoA-DD A.4.2.2.	Means of verification by CME
1	<p>The geographical boundary of the CPA including any time-induced boundary shall be consistent with the geographical boundary set in the PoA</p> <p>Justification by DOE The CPA-DD under section A.4.1.2 shall provide a map of geographical boundary which is in accordance with the geographical boundary set in the PoA. The CPA-DD-KE-01 under section A.4.1.2 with the full list of district names and codes in its Annex.5 was confirmed to be consistent with the set of the latest version of PoA-DD. Therefore, this criteria are deemed sufficiently established, and they comply with the Procedures, and the Standard Para.14.(a).</p>	<p>Distribution plan of the SSC-CPA</p> <p>Any amendments on the project boundary will be done in accordance with the <i>Clarifications regarding the “Procedures for the registration of a Programme of Activities as a single CDM project activity and issuance of Certified Emission Reductions for a Programme of Activities”</i> (EB 60, Annex 26).</p>
2.	The CPA has measures in place to avoid double counting	
2a.	<p>Project lamps distributed by the CPA will be marked for clear and unique identification with the project activity</p> <p>Justification by DOE The measures to avoid double counting was demonstrated in details at Operation and Management Plan in the PoA under section A.4.4.1 , which shall be applied to the CPA under the contractual agreements between CME and each CPA as noted at Criterion 14 of this Table. As the one example with CPA-DD-KE-01, JCI identified the fourteen (14) digital code printed on the products/7.15/, also verified with the contract/6.3/ as well as with the manuals/7.14.2/. Therefore the criteria are deemed sufficient, and they comply with the Standard Para.14.(b).</p>	<p>Mark on the project lamps distributed by the CPA. The mark should at least uniquely identify the project lamp with the PoA and with the CPA.</p>
2b.	<p>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>Justification by DOE JCI verified with the CPA-DD-KE-01 with its contractual agreement with CME/6.3/ in addition to its description under sections A.4.7.and B.2. Therefore the criterion is deemed sufficient.</p>	<p>Signed confirmation from the entity implementing the CPA, confirming that the project has not yet been included in another Programme of Activities or has not yet been registered as a single CDM project activity</p>
3	<p>The project lamps and charging systems will at least meet the minimum technical and operational requirements as specified in version 01 of AMS III.AR <i>Substituting fossil fuel based lighting with LED lighting systems</i>. The CPA shall also comprise of activities that replace portable fossil fuel based lamps with LED-based lighting systems in residential and non-residential applications</p>	
3a	<p>The project lamps shall have a useful lifetime of at least 5,000 hours (certified by the manufacturer);</p>	<p>Certificate from the manufacturer</p>

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#	Eligibility criteria noted by CME at PoA-DD A.4.2.2.	Means of verification by CME
	<p>Justification by DOE The Criterion 14 ensures through the contractual agreement that the CPAs have to deliver the BFP products which fulfill the performance specification with manufacturer certification. JCI verified the 1st CPA with its CPA-DD-KE-01 that it included the specifications of rated average life at sections A.2.and B.2.. As for “Certificate from the manufacturer “ for the rated lifetime at least 5,000hours, JCI verified with the certificate for the listed project lamps. /7.20//7.21//7.22/ , in which the performance were tested with the international standard at the manufacturer, and were authorized by Operations Director of the product. The validity of the Manufacturer Certification was crosschecked with the 3rd party Testing Verification issued by Lighting Africa for the listed project lamps. /7.23//7.24//7.25/ JCI also crosschecked with the test report by the manufacturer/7.11/, and verified that Relative luminous flux after 10,000 hour were 74%-79% (criteria over 70% in the Methodology/3.2/), thus fully complying with Para.3 of the Methodology /3.2/. The third party certificates will be verified also at verification time as noted FAR-2 of the Protocol of this Validation Report. Therefore the criteria are deemed sufficient. And the procedure complied with the Standard Para.14.(c)</p>	
3b	The project lamps’ batteries shall have a charging efficiency of at least 50%	Certificate from the manufacturer
	<p>Justification by DOE The Criterion 14 ensures through the contractual agreement that the CPAs have to deliver the BFP products which fulfill the performance specification with manufacturer certification. JCI verified the 1st CPA with its CPA-DD-KE-01 that it included the specifications of project lamps’ battery charging efficiency at sections A.2.and B.2.. As for “Certificate from the manufacturer “ for the battery charging efficiency is at least 50% , JCI verified with the certificate for the listed project lamps. /7.20//7.21//7.22/ , in which the performance were tested with the international standard at the manufacturer, and were authorized by Operations Director of the product. The validity of the Manufacturer Certification was crosschecked with the 3rd party Testing Verification issued by Lighting Africa for the listed project lamps. /7.23//7.24//7.25/ Therefore the project lamps comply with Para.3 of the Methodology /3.2/. The third party certificates will be verified also at verification time as noted FAR-2 of the Protocol of this Validation Report. Therefore the criteria are deemed sufficient. And the procedure complied with the Standard Para.14.(c)</p>	
3c	The project lamps shall have a minimum of one year warranty which will cover free replacement or repair of any failed lamps, batteries and where applicable solar panels.	Warranty card.
	<p>Justification by DOE The Criterion 14 ensures through the contractual agreement with CPA that CME has control of all records and information related to the implementation of individual CPAs, including the record of Warranty card . JCI verified with the contractual agreement ./6.3/ As for Criterion as “Warranty card “, CPA-DD-KE-01 under section B.2.included the warranty period, as planned by Operation and management plan of PoA-DD at A.4.4.1. Therefore the criterion is deemed sufficient. And this item 3c complied with Para.4 of the Methodology/3.2/, therefore complied with one of the conditions of the Standard Para.14.(c).</p>	
3d	The CPA shall comprises activities that replace portable fossil fuel based lamps with LED-based lighting systems in residential and non-residential applications	Distribution plan
	<p>Justification by DOE The Criterion 14 ensures through the contractual agreement with CPA’s responsibility of the</p>	

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#	Eligibility criteria noted by CME at PoA-DD A.4.2.2.	Means of verification by CME
	distribution plan of the project lamps to replace portable fossil fuel based lamps as defined by PoA-DD under section A.2 ./6.3/ The CPA-DD-KE-01 demonstrated the plan under section A.2 together with the baseline information in Kenya at Annex 3. Therefore the criterion is deemed sufficient.	
4	The start date of the CPA shall not be prior to the commencement of the validation of the PoA.	The start date of the CPA will be defined as the date on which the CPA starts distribution of project lamps under the PoA and shall not occur prior to the commencement of the validation of the PoA. Sales documentation such as invoices, receipts or warranty cards shall be provided as documentary evidence.
	Justification by DOE The criterion defined to check with the invoice of the project lamp for the CPA, and JCI confirmed with the 1 st CPA with its CPA-DD-KE-01 that it included the date at section A.4.2.1., which was not prior to the commencement of the validation of the PoA (07 September 2011) verified by the first sales invoice. /7.16/. Therefore the Criterion is deemed sufficient, and thus complied with the Standard Para.14.(d).	
5	The CPA meets all the applicability criteria of AMS III.AR (version 01)	Detailed assessment that the CPA meets all the eligibility criteria of AMS III.AR (version 01).
	Justification by DOE The criterion defined to check with CPA. JCI verified CPA-DD-KE-01 as an example, which demonstrated the assessment at Table 1 under section B.2.. The confirmation of the assessment with evidences are verified and justified as noted at other items of this Table 5, including technical and operational requirements at item 3, requirement pertaining to demonstration of additionality at item 6, conditions related to undertaking local stakeholders consultations and environmental impact analysis at item 7, requirement for monitoring at item 10, and baseline identification as demonstrated at Section 7.1.of this validation report. Therefore the Criterion is deemed sufficient, and thus complied with the Standard Para.14.(e).	
6	The CPAs meet the requirement pertaining to the demonstration of additionality.	
6a	For microscale CPAs, the CPA requirements stipulated in the <i>Guidelines for demonstrating additionality of microscale project activities</i> (version 04, EB 68, Annex 26) are as given below: “Type III project activities that aim to achieve emissions reductions at a scale of no more than 20 ktCO ₂ e per year, are <u>additional</u> if any <u>one</u> of the following conditions is satisfied: (a) The geographic location of the project activity is a LDC/SID or special underdeveloped zone (SUZ) of the host country: SUZ is a region in the host country (zone, municipality or any other designated official administrative unit) identified by the Government in official notifications for development assistance including for planning, management, and investment satisfying any one of the following conditions using most	a).Emission reduction estimations (i) Confirmation that the geographic location of the project activity is a LDC/SID or special underdeveloped zone (SUZ) of the host country: SUZ is a region in the host country (zone, municipality or any other designated official administrative unit) identified by the Government in official notifications for development assistance including for planning, management, and investment satisfying any one of the following conditions using most recent available data: <ul style="list-style-type: none"> • The proportion of population with income less than USD 2 per day (PPP) in the region is greater than 50%; • The GNI per capita in the country is less than USD 3000 and the population of the region is among the poorest 20%

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#	Eligibility criteria noted by CME at PoA-DD A.4.2.2.	Means of verification by CME
	<p>recent available data:</p> <ul style="list-style-type: none"> The proportion of population with income less than USD 2 per day (PPP) in the region is greater than 50%; The GNI per capita in the country is less than USD 3000 and the population of the region is among the poorest 20% in the poverty ranking of the host country as per the applicable national policies and procedures <p>(b) The project activity is an emission reduction activity with both conditions (i) and (ii) satisfied (see below);</p> <p>(i) Each of the independent subsystems/measures in the project activity achieves an estimated annual emission reduction equal to or less than 600 tCO₂e per year; and</p> <p>(ii) End users of the subsystems or measures are households /communities /SMEs.</p>	<p>in the poverty ranking of the host country as per the applicable national policies and procedures</p> <p>or</p> <p>(ii) Emission reduction calculations showing estimated annual emission reduction of each independent subsystem and business plan indicating end users of the subsystems</p>
	<p>Justification by DOE</p> <p>The defined Criteria are deemed sufficient for a CPA to comply with requirement of <i>Guidelines for demonstrating additionality of microscale project activities</i>, thus complied with the Standard Para.14.(f) and Para.8.</p>	
6b	<p>For CPAs that do not meet the requirements of the <i>Guidelines for demonstrating additionality of microscale project activities</i>, additionality of a typical CPA shall be demonstrated using the simplified procedures for small-scale project activities as given in <i>Guidelines on the Demonstration of Additionality of Small-Scale Project Activities (Version 09.0)</i>. In line with the <i>General guidelines for SSC CDM methodologies</i> (version 18, EB 66, Annex 23), the project activity shall further use the <i>Non-binding best practice examples to demonstrate additionality for SSC project activities</i> (EB 35, Annex 34) and the <i>Guidelines for objective demonstration and assessment of barriers</i> (version 01, EB 50, Annex 13).</p> <p>More specifically, a typical CPA would not have occurred anyway due to the following barriers:</p> <p>The CPA is implemented in a country (or other geographical area) where fossil fuel usage for lighting purposes is prevailing practice.</p>	<p>a) Documentation of the common practice of fuel usage for lighting in the project region (e.g. based on representative sample surveys, official data or peer reviewed literature).</p> <p>b) Documentation of the common practice of the lighting technology used in the project region (e.g. based on representative sample surveys, official data or peer reviewed literature)</p> <p>c) Agreement between Barefoot Power Pty Limited and In Country Distribution Company that is distributing Barefoot Power products. If the In Country Distribution Company is not distributing Barefoot Power's products, proof that it is not a subsidiary of a multinational group and/or evidence to show that the project could not access appropriate capital without consideration of CDM revenues such as loan agreements/bank statements to show that CDM revenues were critical in approval of the loan and/or Emission Reduction Purchase</p>

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#	Eligibility criteria noted by CME at PoA-DD A.4.2.2.	Means of verification by CME
	<p>The CPA is implemented in a country (or other geographical area) where a less technologically advanced alternative to the LED based lighting systems is available, which is based on fossil fuel. It will further be demonstrated that the less technologically advanced alternative involves lower risks due to the performance uncertainty or low market share of the LED based lighting systems adopted.</p> <p>Finally, the CPA would not have occurred anyway due to one or more access-to-capital barriers. Existing barriers for access-to-capital can be demonstrated at various levels:</p> <ul style="list-style-type: none"> • It can be demonstrated that the implementation of the CPA is consequential to the removal of the access-to-capital at the level of Barefoot Power (i.e. the CPA would not have been implemented if Barefoot Power would not have been able to raise the necessary capital for the development of its next generation of high-quality solar-based LED systems). • It can be demonstrated that CPA would not have been implemented due to lack of access to working capital at the distributor level. • It can be demonstrated that the CPA would not have been implemented due to lack of finance at the end-user level. 	Agreements
	<p>Justification by DOE</p> <p>The PoA-DD under section A.4.3. appropriately described all relevant additionality-related guidelines and standards, as well as the baseline information in the Host country, thus complying with the Standard Para.11. The procedures for small-scale project activities, the PoA-DD defined the criteria under section E.5., that the CPA is to demonstrate the baseline information as listed above (a) and (b) , and also to comply with the contractual agreement with the CME (BFP) for the conditions to deliver the BFP project lamps, in addition to complying with the CPA's financial conditions as listed above (c).</p> <p>The CPA-DD-KE-01 for example , demonstrated with the required information under section B.3. and Annex3, that the PoA project would not have occurred at the CPA (SSK) level due to mainly "access-to-capital barrier".</p> <p>JCI assessed that such "access-to-capital barrier" of the CPA (SSK) was reasonable judging from that the project lamps of the proposed PoA activity were uniquely developed and manufactured and delivered by the CME (BFP) and each CPA will be only sales function either partly owned or fully owned by the CME company(BFP) as described at the PoA-DD section A.2. and verified during the on-site assessment/7.15/.</p> <p>The detailed assessment on the additionality for both CME level and CPA level are separately demonstrated at Section 8 (Additionality) of this validation report.</p> <p>Therefore the criteria for additionality of a typical CPA are deemed sufficient for a CPA to</p>	

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#	Eligibility criteria noted by CME at PoA-DD A.4.2.2.	Means of verification by CME
	comply with requirement of the Standard Para.7,9,11 , thus complying with the Standard Para.14.(f).	
7	The CPA shall conduct a local stakeholder consultation meeting and perform an environmental impact analysis.	a) Local stakeholder consultation meeting report as well as the meeting overview detailed in section D of the CPA DD. b) Environmental analysis carried out in line with local environmental laws and detailed in section C of the CPA DD.
	Justification by DOE The PoA-DD defined that both “ <i>Stakeholders’ comments and Due account</i> ” and “ <i>Environmental Analysis</i> ” will be done at SSC-CPA level, under sections C and D. The PoA-DD under section C analyzed the requirements by laws and regulations imposed in the host country for the activity of the PoA (No Environmental Impact assessment report is required in Kenya for the Project), thus JCI verified that the CME is capable of judging the requirement by the CPA with respect of environmental documentation requirement. /7.15//4.1/. JCI verified with the CPA-DD-KE-01 under section C that it has reviewed the relevant local environmental regulations for the PoA activity/4.1//4.2//4.5/, and the required actions have been implemented as more detailed demonstrated at Section 12 (Environmental impacts) of this validation report. JCI also verified with the CPA-DD-KE-01 under section D that it has implemented Stakeholder’s comment including the invitation step and summary of comments and how due account was taken appropriately,/7.1//7.2/ as more detailed demonstrated at Section 11 (Local stakeholder’s consultation) of this validation report. Therefore, the Criteria are deemed sufficient and this complied with the Standard Para.14(g)	
8	The CPA has not received funding from Annex I parties that results in a diversion of official development assistance	Confirmation letter from CPA entity that the CPA has not received funding from Annex I parties <u>or</u> confirmation letter from Annex I party that funding to the CPA does not result in a diversion of official development assistance.
	Justification by DOE The CPAs shall provide a Confirmation letter under this Criterion condition. JCI verified the CPA-DD-KE-01 under section A.4.5. declared that the CPA has not received any public funding from Parties included in Annex I parties and its affirmation letter was confirmed with the evidence/7.17/. Therefore, this criteria are deemed sufficiently established, and they comply with the Procedures, and the Standard Para.14.(h).	
9	The CPA targets households and SMEs that use fossil fuel lamps for lighting purposes	Business plan and distribution model. Documentation of the common practice of fuel usage for lighting in the project region (e.g. based on representative sample surveys, official data or peer reviewed literature)
	Justification by DOE The PoA-DD under sections A.2. and A.4.3 defined the target group and their baseline information for the PoA activity. JCI verified the CPA-DD-KE-01 as an example of CPA and confirmed that CPA-DD-KE-01 under section B.2. and Annex3 defined distribution model and baseline information of target end-users, through official data and peer reviewed literature. Therefore the Criteria for inclusion of a CPA are deemed sufficient . Thus the procedure complied with the Standard Para.14.(i)	
10	For CPAs with project lamps that will claim emission reductions for up to seven years, the project activity will carry out a survey in the	Monitoring manual of CPA that includes the description of the sampling plan more specifically the sampling design, data to be

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#	Eligibility criteria noted by CME at PoA-DD A.4.2.2.	Means of verification by CME
	<p>third year of the CPA's crediting period to determine the percentage of project lamps distributed to end users that are operating and in service.</p> <p>The CPA entity shall put in place a system to record data and information about the end users to allow for sampling in year three of the crediting period of the CPA. At a minimum the information should include:</p> <ul style="list-style-type: none"> • Contact details of end user • Location of end user • Serial number of the project lamp 	<p>collected and implementation plan in line with version 02.0 of the <i>Standard for sampling and surveys for CDM project activities and programme of activities</i> (EB 65, Annex 2).</p> <p>A sampling plan detailed in section B.6.1 of the CPA DD in line with version 02.0 of the <i>Standard for sampling and surveys for CDM project activities and programme of activities</i> (EB 65, Annex 2).</p>
	<p>Justification by DOE</p> <p>The PoA-DD defined the Monitoring Plan for the PoA activity under section A.4.4.2 , and also the monitoring plan for a SSC-CPA under section E.7.2. The record keeping of the end users' data of the project lamps defined at the Monitoring Plan is under each CPA, but the data analysis and ERs calculation are under CME including the sampling design during the 3rd year operation according to the Standards for sampling and surveys/3.4./ The role of each CPA for record keeping as well as for preparation of the monitoring manual including a sampling plan are to be defined at CPA-DD-KE-01 under section B.6. 1.</p> <p>The actual CPA-DD-KE-01 under section B.6. 1. , however did not include a sampling plan because of the applied the project lamps types (Option 1), thus complying with the methodology. JCI verified that such monitoring procedure and sampling procedure under the PoA were reasonable and appropriate in accordance with the Standards for sampling /3.4./ , the Methodology /3.2/ as well as the Standard Para.14(j) .</p> <p>Therefore the Criterion is deemed sufficient.</p>	
11	The annual emission reductions achieved by the CPA will not exceed 60 ktCO ₂ e	Emission reduction estimations
	<p>Justification by DOE</p> <p>The Criterion is sufficiently objective as the condition.</p> <p>JCI verified the CPA-DD-KE-01 as an example of CPA that the annual ERs at CPA-DD-KE-01 A.4.4.was calculated with adequate application of the parameters /1.8/ (as specified PoA-DD under section E.6.) and was under the limit under the Methodology (60 ktCO₂e throughout the crediting period).</p> <p>Thus the procedure complied with the Standard Para.14.(k) and the Methodology.</p>	
12	The CPA is not a de-bundled component of a large-scale project activity in accordance with the latest approved version of the <i>Guidelines on assessment of de-bundling for SSC project activities</i> .	De-bundling check carried in line with the latest approved version of the <i>Guidelines on assessment of de-bundling for SSC project activities</i> .
	<p>Justification by DOE</p> <p>The Criterion is sufficiently objective as the condition.</p> <p>JCI verified the CPA-DD-KE-01 as an example of CPA that the exemption condition from performing a de-bundling check described at CPA-DD-KE-01 A.4.6.was calculated adequately from the emission value per project lamp in the ERs./1.8/</p> <p>Thus the procedure complied with the Standard Para.14.(l) and the Guidelines.</p>	
13	The LED based lighting systems distributed by the CPA will be charged solely by a renewable	Technical specifications of the project lamps that are distributed by the CPA.

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#	Eligibility criteria noted by CME at PoA-DD A.4.2.2.	Means of verification by CME
	energy system.	
	Justification by DOE The Criterion 14 ensures through the contractual agreement with CPA that CME has control of the technical specifications of the project lamps that are distributed by the CPA, including the LED based lighting systems are charged solely by a renewable energy system. JCI verified with the contractual agreement ./6.3/ The CPA-DD-KE-01 declared the specifications of the LED at sections A.2.and B.2., which JCI confirmed to comply with Methodology Para.2(a). thus with the Standard Para.14.(e). Therefore the Criterion is deemed sufficient.	
14	The CPA entity has signed contractual agreements with the CME to participate in the PoA. Those agreements will include all rights and responsibilities of both parties, e.g. approval procedures by the CME, monitoring requirements, emission reduction transfer and benefit sharing. At a minimum the agreement shall ensure that the coordinating/managing entity will have control of all records and information related to the implementation of individual CPAs and will be in a position to ensure each CPA is being operated in accordance with the specific requirements of the programme.	Agreement between CME and entity implementing the CPA.
	Justification by DOE The PoA-DD defined under section A.2. that the contractual agreements between CME and CPA for the activities under the PoA, which shall be checked by the CME. JCI justified that this Criterion is deemed to be sufficient and comprehensive, when applied for the condition for other items in this Table for inclusion of a CPA under the PoA. Thus the Criteria complied with the Procedures for PoA Para.6.(i). ./3.9/	

As justified by the note at the foot line of each corresponding items of above Table 5, JCI assessed that the eligibility criteria for inclusion of a CPA under the proposed PoA were demonstrated adequately according to the Standard./3.3/ In addition, as JCI assessed at the following section 6 (Operational and management plan) of this report, the operational and management arrangement demonstrated in the PoA-DD/1.2/ was sufficient that the CME could control the criteria for inclusion of a CPA of the PoA project, which was justified through the interview during the on-site assessment/7.15/ and the related documents.

6. Operational and Management Plan

JCI assessed the operational and management plan developed by the Coordinating and Managing Entity, Barefoot Power Pty Limited as a CME (hereafter referred to “the CME”,or “BFP”) for the proposed PoA, whether the distinct and transparent description of the operational and

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management arrangement with its CPA entities were developed, through the document review and interviews and observation during the on-site assessment./7.15/

The first CPA under the CME's management is "Barefoot Power Lighting Programme SSK-KE-01", operated by "Smart Solar Kenya Limited" in Kenya (hereafter referred to "SSK").

JCI confirmed that Barefoot Power Pty Limited (BFP) as a CME developed the operating and implementing framework of PoA, including the roles and responsibility of each entity, BFP and SSK (CPA entity in Kenya), which are covered by the description at sections A.2., A.4.2.2 and A.4.4. of PoA-DD, and at section A.2. of CPA-DD-KE-01 . JCI validated such framework plan with the draft operation manual prepared by the BFP, and raised CL-8 and CL-10 in order to further substantiate a management system guided by Para.17 of the Standard./3.3/.

The CME has covered more specific management system for ensuring its competencies to check the features of CPAs and to check the requirements and eligibility criteria to be met with CPA for inclusion in the registered PoA, and demonstrated at section A.4.2.2 of PoA-DD/1.2/ .

JCI has assessed these elements of the management system according to Para.17 of the Standard./3.3/, as below.

- (a) The CME appointed a technical reviewer with its responsible role and function including the organization structure, which JCI verified with the Manual. /7.14.2/
- (b) The records of arrangements for training and capacity development of personnel was covered in the Manual /7.14.2/, which JCI confirmed adequate.
- (c) The procedure for technical review of inclusion of CPAs was stated in the PoA-DD under section A.4.2.2. as well as the Justification to be included by the CPA under section B.2. of CPA-DD-KE-01. JCI verified with the CPA-DD-KE-01 which described the technical specifications of the project lamps under section A.2. of CPA-DD-KE-01. The performance of these project lamps were confirmed to be certified with Operations Director of BFP after the manufacturer's test/7.20//7.21//7.22/, and such procedure was implemented by the CPA as verified by the CME through the contractual agreement. /6.3/ JCI also confirmed such procedure was covered in the Manual./7.14.2/
- (d) The procedure to avoid double counting was stated at the PoA-DD under section A.4.2.2., which would be implemented as already verified under Eligibility Criteria for CPA inclusion (Item 2) in Section 5 of this Report. JCI also verified such procedure was filed in the Manual. /7.14.2/
- (e) The records and documentation control process was stated at the PoA-DD under section A.4.2.2., which JCI verified with the Manual. /7.14.2/
- (f) The internal audit procedure as the measures for continuous improvements of the PoA management system was described in the PoA-DD under section A.4.2.2., which JCI verified with the Manual. /7.14//7.14.2/

JCI concluded the framework plan, as evidenced by the manual between the CME and CPA entities/7.14.2/ and also by the contractual agreement /6.3/, was practical and complying with the latest Standard/3.3/ and the Procedure./3.9/

JCI also confirmed that BFP as a CME planned management system demonstrated in details under section A.4.2.2 of PoA-DD/1.2/, which were reflected to B.2. of CPA-DD-KE-01 “Justification of why the SSC CPA is eligible to be included in the Registered PoA”, and also to B.6.1. of CPA-DD-KE-01 “Description of the monitoring plan”.

As the result of assessment on the eligibility criteria for inclusion of a CPA under the proposed PoA, JCI determined the eligibility criteria were sufficiently objective and comprehensive to permit the assessment of the inclusion of CPAs in the proposed PoA .

7. Baseline and monitoring methodology

7.1 Applicability of selected methodology to the project activity

JCI assessed for the applicability of selected methodology AMS-III.AR though taking into consideration on following steps in accordance with the paragraph 76 of VVM.

1) Step-1 Document review:

After reviewing the PoA-DD, CPA-DD, the emission reductions calculation sheet and related documents such as technical specifications, JCI had issued the Initial Findings prior to the on-site visit for the preparation at on-site interviews.

2) Step-2 On-site visit observations/inspection:

JCI reviewed the design data, relevant laws/regulations/codes, evidences, etc at the on-site interviews and conducted the site observation/inspection of the physical site or the project lamps and conventional kerosene lamps to confirm the project activity.

3) Step-3 Further follow-up actions and correspondences with the project participant on the Protocol to close the CARs and CLs:

The estimated Emission Reductions in the Section A.4.4. of CPA-DD-KE-01/1.6/ was reviewed and JCI confirmed they complied with the SSC threshold.

JCI validated and concluded that application of AMS-III.AR version 01/3.2/ to the project activity was appropriate after clarifications with the project participant as shown at the below applicability’s check in Table 7.

The Table 7 included the justification by DOE to Qualification of the PoA activity under the methodology as well as Justification by DOE to Compliance of the 1st CPA under the methodology, and concluded that the revised CPA-DD-KE-01 as well as the revised PoA-DD have appropriately covered all related paragraphs of AMS-III.AR version 01/3.2/ for applicability assessment of the PoA Project.

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Table 7. Applicability's check for the project

Para No.	AMS.III.AR requirement	Qualification of the PoA activity / Compliance of the CPA
1.	<i>This category comprises activities that replace portable fossil fuel based lamps (e.g. wick-based kerosene lanterns) with LED based lighting systems in residential and non-residential applications (e.g. ambient lights, task lights, portable lights).</i>	The project activity involves the distribution of LED based lighting systems that replace the use of portable fossil fuel based lamps. The application and target end user group were clearly described as “households and Small and Medium Enterprises (SMEs)” at section A.2. of PoA-DD, and section A.2. of CPA-DD-KE-01.
	Justification by DOE : applicable The baseline fact in the host country was demonstrated both PoA-DD and CPA-DD-KE-01 ,which JCI confirmed by published documents /5.1/ /5.2//5.3//5.6/	
2.	<i>This methodology is applicable only to project lamps whose batteries are charged using one of the following options: (a) The project lamps shall use rechargeable batteries charged by renewable energy systems (photovoltaic system)</i>	All project lamps distributed under the project activity are solely charged by renewable energy systems, e.g. photovoltaic systems, as described at section A.2. of PoA-DD, also at section A.2.CPA-DD-KE-01.
	Justification by DOE : applicable They were confirmed by the technical specifications, which is controlled by the CME(BFP) and their specifications was listed at section A.2.CPA-DD-KE-01, which complied with Para.2 (a) of Methodology	
3.a	<i>At a minimum project lamps shall be certified by their manufacturer to have a rated average life of at least 5,000 hours. Rated average life is the life certified by the manufacturer or responsible vendor as being the time at which the lamp.s initial light output will decline by no more than 30%.</i>	Project lamps have a minimum average life of at least 5,000 hours as certified by the manufacturer. The rated average life are fulfilled as a time at which more than 70% of the initial light intensity are maintained. The technical review is managed by the CME as demonstrated at section A.4.2.2. of PoA-DD, and the actual specifications are listed at section A.2 of CPA-DD-KE-01
	Justification by DOE : applicable The claimed performance was verified with the evidence /7.11/ (Product quality report). The evidence showed the performance about the rated average life was fulfilled in compliance with Para.3 of the Methodology. The manufacturer certification for all types of the listed project lamps in the revised CPA-DD-KE-01 /7.20//7.21//7.22/ were verified and satisfactory for the required rated life. The validity of the manufacturer certification was already demonstrated at 3a of Table 5 (Eligibility Criteria Check) of Section 5 of this report.	
3.b	<i>In addition, the manufacturer shall certify that the project lamps. battery charging efficiency, at the time of purchase, is at least 50%.</i>	The battery charging efficiency of the project lamps at the time of purchase is at least 50%, as certified by the manufacturer.
	Justification by DOE : applicable The claimed performance was verified with the evidences /7.20//7.21//7.22/ (manufacturer certification) for all types of the listed project lamps in the revised CPA-DD-KE-01	
4.	<i>Project Lamps shall have a minimum of one year warranty which covers free replacement or repair of failed lamps, batteries and where applicable solar panels</i>	All project lamps distributed under the project activity have a minimum one-year warranty, which covers free replacement or repair of any failed lamps, batteries and solar panels, as specified at section B.2.of CPA-DD-KE-01 and at section A.4.2.2. of PoA-DD
	Justification by DOE : applicable The responsibility of the CPA entity will be controlled by the CME as defined at Eligibility Criteria	

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Para No.	AMS.III.AR requirement	Qualification of the PoA activity / the CPA	Compliance of
	(item 3c.) of the PoA-DD, thus this requirement is verifiable.		
5.(a)	<i>The project design document shall explain the proposed method of distribution of project lamps. It shall also explain how the proposed project activity will: a) Ensure that the replaced baseline lamps are only those directly consuming fossil fuel. This can be done through documentation of the common practice of fuel.</i>	Method of distribution of project lamps is explained at sections A.2. and A.4.4.1.of PoA-DD and section A.2.of CPA-DD-KE-01 The local information about replaced baseline lamps were described at section A.4.3.of PoA-DD according to the published documents, also at Annex 3 of CPA-DD-KE-01.	
	Justification by DOE : applicable The method of distribution was appropriately defined, and the baseline lamp utilization at the host country was verified by CL-7 and by the on-site visit /7.15/, and confirmed by published documents /5.1//5.2//5.6/		
5.(b)	<i>b) Eliminate double counting of Emission Reductions, for example due to LED manufacturers, suppliers of solar and/or battery equipment, or others claiming credit for Emission Reductions for the project lamps. At a minimum project lamps shall be marked as CDM project lamps;</i>	All project lamps shall have a unique identification so that it is marked as being within the CPA, as documented at sections A.4.2.2.and A.4.4.1 of PoA-DD, and section B.2. of CPA-DD-KE-01. The measures are that " Project lamps distributed by the CPA have a serial number and CPA code marked on their casing", and "The CPA implementing entity has signed an agreement with the CME confirming 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."	
	Justification by DOE : applicable All project lamps will have unique identifications, and the measures to avoid double counting was defined at Eligibility Criteria (item 2.) of the PoA-DD under section A.4.2.2., thus this requirement is verifiable.		
5.(c)	<i>Ensure compliance with prevailing regulations pertaining to use and disposal of batteries.</i>	The compliance with the local regulations in the host country were stated at CPA-DD-KE-01 under sections C.2. and C.3.by referring the corresponding regulation codes.	
	Justification by DOE : applicable The applied regulations were confirmed with the evidences /4.1//4.2/, and their implementation by the CPA was verified with the import certificate of project lamps /6.2/ and the battery disposal contract with the certified laboratory./6.1/		
6.	<i>The project design document shall include design specification of project lamps such as: (a) Lamp wattage (in Watts) and illuminance (in lux); (b) Lamp rated lifetime (in hours); (c) Where applicable type and the rated capacity of renewable energy equipment for charging the battery (in Watts); (d) Type (e.g. NiMH, Lead-Acid, Li-ion), and rated capacity of the battery (in Ampere Hours);</i>	The all required technical specifications of the project lamps from (a) to (i) (except (h)) have been included in section A.4.2.1. of PoA-DD and in section A.2. of CPA-DD-KE-01 for the project lamps, which were confirmed to comply with specifications of AMS III.AR ver. 01.	

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Para No.	AMS.III.AR requirement	Qualification of the PoA activity / the CPA	Compliance of
	<p>(e) Type of charge controller (e.g. active or passive);</p> <p>(f) Autonomous Time and Daily Burn Time;</p> <p>(g) Where applicable (with solar energy charging systems) maximum, minimum and average monthly Solar Fraction values during the year;</p> <p>(h) Where applicable grid charging time;</p> <p>(i) Physical protection against weather impacts (e.g. rain, heat, insect ingress).</p>		
	<p>Justification by DOE : applicable</p> <p>The technical specifications of the revised CPA-DD-KE-01 under section A.2.were reviewed to comply with the requirements at Para.6 of AMS III.AR ver. 01.</p>		
7.	<p>The project activity shall restrict the number of project lamps distributed through the project activity to no more than five per household (for residential applications) or per business location (e.g. for commercial applications such as shops)</p>	<p>The restriction of the numbers of project lamps distributed through the project activity to no more than five project lamps per household (for residential applications) or per business location (e.g. for commercial applications such as shops) is controlled by a check box replying to whether the ‘Number of Project Lamps in use in end-user’s household is more than 5’ will be on the warranty card. If the end-user is utilising 5 or more project lamps, the box must be checked, and emission reductions would not be claimed for these lamps. Such measures are recognized in the PoA-DD under section A.4.4.1. and CPA-DD-KE-01 under section B.2.</p>	
	<p>Justification by DOE : applicable</p> <p>The measures to restrict to no more than five project lamps per household was controlled by the note in a Warranty Card for the end user (described at section A.4.4.1 of PoA-DD), and monitored through the sales record by the CME as well as through Monitoring Information for each CPA during verification period (described at section Annex.4 of CPA-DD-KE-01)</p> <p>Thus the implementation is deemed verifiable to comply with the condition for Para.7 of the Methodology</p>		
8.	<p>Measures are limited to those that result in emissions reductions of less than or equal to 60 k ton CO2 equivalent annually.</p>	<p>The ex-ante annual ERs of each CPA is reported in CPA-DD-KE-01 under sections A.4.4.and B.5.</p>	
	<p>Justification by DOE : applicable</p> <p>The ex-ante annual ERs of CPA-DD-KE-01 was confirmed to be less than 60 k ton CO2 equivalent annually. JCI also confirmed that the ERs/1.8/ for the revised CPA-DD-KE-01was accurate. The scale limit of each CPA will be monitored and controlled by the CME as defined Eligibility Criteria (item 7.) of the PoA-DD under A.4.2.2., thus this requirement is verifiable.</p>		
9.	<p>LED Lamp Effective Useful Life</p> <p>Under Option 1 : Project Lamps are assumed to operate for two years after project lamp distribution to the end-users, therefore emission reductions can only be claimed for two years.</p> <p>Under Option 2 :Project Lamps are assumed to operate for seven years after project lamp distribution to the end-users,</p>	<p>Project Lamps distributed will either operate for two years after they have been distributed to end users or seven years after they have been distributed to end users with the conditions met with the regulated para.10 and/or para.11 of the applied methodology was described under section E.2. of PoA-DD.</p> <p>The actual case for the revised CPA-DD-KE-01 was under Option 1 as specified with the technical specification at section A.2. of the revised CPA-DD-</p>	

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Para No.	AMS.III.AR requirement	Qualification of the PoA activity / the CPA	Compliance of
	<i>and thus emission reductions can be claimed for up to seven years per project lamp, if all the following conditions for the project lamps are met: from (a) to (e) as regulated Para.11 of the applied methodology</i>	KE-01.	
	Justification by DOE : <u>applicable</u> The special technical specifications for the project lamps claimed as Option 1 described at the revised CPA-DD-KE-01 under section A.2.were reviewed and justified as complying with the requirements at Para.10 of AMS III.AR ver. 01.		

Therefore, JCI confirmed that the demonstration in the PoA-DD regarding the application of methodology AMS-III.AR.. version 1.0 to the project activity is appropriate, which also ensured the requirement of the eligibility criteria specified by Para.14 (e) and (k) of the Standard./3.3/

7.2. Project boundary

JCI confirmed the PoA is located within the geographical boundaries of Republic of Kenya, and the first specific CPA (CPA- BFP SSK-KE-01) was implemented within the physical boundary of Republic of Kenya, in which the project lamps will be distributed in the individual households and Small and Medium Enterprises (SMEs) to replace the kerosene lamps which have been the emission sources.

Thus, JCI confirmed and concluded that the identified boundary for the PoA and the one specific CPA (BFP SSK-KE-01) and the selected sources and gases were justified for the project activity.

De-bundling for SSC project activities

JCI has done the de-bundling check according to the paragraph 2, Annex 13 of EB54 “Guidelines on Assessment of Debundling for SSC Project Activities”, as stated in the Section A.4.6. of CPA-DDs (BFP SSK-KE-01).

JCI confirmed and concluded that the specified project BFP SSK-KE-01, was not de-bundling component from the following viewpoints of the above requirements through the interview at on-site and related documents,

If there is a registered small-scale CDM project activity or an application to register another small-scale CDM project activity;

- (g) *With the same project participants;* No SSC project with Barefoot Power Pty Limited (the CME)
- (h) *In the same project category and technology/measure;* No Solar LED Lamp project
- (i) *Registered within the previous 2 years;* Two SSC project were registered within past 2 years

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in Kenya, but not under (a), (b).

- (j) *Project boundary is within 1 km of the project boundary of the proposed small- scale activity at the closest point.:* No SSC project within 1 km of the project boundary

JCI has also confirm the de-bundling according to the paragraph 10, Annex 13 of EB54 “Guidelines on Assessment of Debundling for SSC Project Activities” from the different viewpoint on descriptions as above in the Section A.4.6. of the CPA-DD-KE-01 (for BFP SSK-KE-01).

JCI confirmed and concluded that the specified project BFP SSK-KE-01 was not de-bundling component from the following viewpoint through the related documents,

- *subsystemms/measures (e.g., solar home system) included in the CPA of a PoA is no larger than 1% of the small-scale thresholds defined by the methodology applied, then that CPA of PoA is exempted from performing de-bundling check i.e., considering as not being a debundled component of a large scale activity. ”*

As described in the Section A.4.6 of CPA-DD-KE-01 /1.6/, under the PoA Project in Kenya, one project lamp was estimated as 0.11 tCO₂/y, much less than 1 % for the thresholds (600 tCO₂/y). Consequently, the de-bundling check was not required for the CPA.

Accordingly the BFP SSK-KE-01, under the proposed PoA Project can be concluded not a de-bundled component of a large scale project activity.

7.3 Application of baseline and monitoring methodology

7.3.1. Baseline scenario

JCI validated for the baseline scenario whether the approved baseline methodology has been correctly applied or not, and the baseline scenario reasonably represents what would occur in the absence of the proposed CDM project activity in accordance with the paragraphs 87(e) of VVM taking the specific features of the AMS-III.AR into consideration.

JCI have reviewed all related materials stated in the PoA-DD/1.2/ and regarding the identification of the baseline for the proposed PoA.

And during the on-site visit, JCI observed the real situation of the utilization of kerosene lamps as baseline scenario for most of households both in Kenya.

JCI validated and confirmed that the baseline scenario was properly determined in the PoA-DD and in the CPA-DD-KE-01.

7.3.2. Project emissions (PE_y)

JCI assessed the Project Emissions (PE_y) according to the approved methodology AMS-III.AR, version 01.

Since the batteries of project lamps are charged using photovoltaic (solar) systems, option for paragraph 2 (a) of AMS-III.AR. was selected and applied, subsequently, there are no project emissions ($PE_y = 0$) according to the Paragraph 15. of AMS-III.AR.

JCI confirmed with the specification of the project lamps and real products during the on-site assessment, and concluded that the project lamps are fully charged by the solar system.

JCI confirmed and concluded that the estimation on project emission (PE_y) as zero as described in the Section E.6. of PoA-DD and B.5.2 of generic CPA and CPA-DD-KE-01 complied with the approved methodology.

7.3.3 Baseline emissions (BE_y)

JCI assessed the Baseline Emissions (BE_y) according to the paragraph 12 to 14 of approved methodology AMS-III.AR, version 01.

JCI confirmed following equation (2) in paragraph 13 of AMS-III.AR. is properly applied for the Baseline Emissions calculation in the DDs.

$$BE_y = DV \times GF_y \times DB_y \quad \text{[Equation (2) in AMS-III.AR.]}$$

DV : Emissions factor (tCO₂e) and DB_y : Dynamic Baseline Factor

The PoA-DD described that each CPA might use alternative values for determination of DV value by referring Para.14 (Alternative values from Default Emission Factor as 0.08 tCO₂e /lamp could only be used when adequate information available), and to use DB_y for Option 2 project lamp when recent fuel usage data are available. JCI judged such alternative by the proposed PoA was reasonable by complying with the methodology Para.12,13.14. /3.2/

The CPA-DD-KE-01 selected $DV = 0.11$ tCO₂e /lamp by taking 5 hours per day as Utilization rate by adopting the survey data for Kenya conducted by Lighting Africa initiative /5.1/, which JCI judged reasonable and credible complying with the methodology Para.14,/3.2/ through by confirming with this published information. The CPA-DD-KE-01 selected the default values specified by Para.12 of the methodology for other element values except the above mentioned Utilization rate for determining DV .

The leakage was considered as the element in the equation of Baseline Emissions according to the approved methodology AMS-III.AR, and the leakage factor was used as 1.0 for the calculation in DDs according to AMS-III.AR.

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Default value $GF_y = 1.0$ was used for the calculation of Baseline Emissions in DDs according to the AMS-III.AR

The summary of the adopted values for $DV / DB_y / BE_y$ in the CPA-DD-KE-01 are shown the below Table 8, which JCI justified as reasonable and complying the methodology by cross-checking public information. /5.1//5.2//5.3//5.6/

Table 8 Summary of $DV / DB_y / BE_y$ values adopted in the DDs

	Default values in AMS- III.AR	PoA-DD (Note A)	CPA-DD-KE- 01	Conclusion/ Evidence
Fuel use rate (FUR) liters/hour	0.025	0.025 (variable)	0.025	OK/ AMS-III.AR
Utilization rate (UR) hours/day	3.5	variable	5	OK Confirmed by Lighting Africa/5.1/ for CPA Kenya
Utilization (UT) days/year	365	365	365	OK AMS-III.AR
Fuel emissions factor (FEF) kgCO ₂ /liters	2.4	2.4	2.4	ditto
Leakage factor	1.0	1.0	1.0	ditto
Number of fuel-based lamps replaced per project lamp:	1.0	1.0 (variable)	1.0	ditto
Net-to-Gross factor	1.0	1.0	1.0	ditto
DV tCO ₂ e / lamp	0.08	Calculated by the above element values	0.11	OK CPA(Kenya) by UR value
DB_y	1.0	(variable)	1.0	OK AMS-III.AR
GF (grid factor)	1.0	1.0	1.0	ditto
BE_y tCO ₂ e / lamp/y	0.08	0.08	0.11	ditto

Note A : PoA-DD noted CPA could take alternative values from Default value for DV

Therefore JCI validated and concluded that the Baseline Emissions calculation in the DDs appropriately utilized the equation (2) of the AMS-III.AR. and applied adequate parameter selection.

7.3.4. Emission Reductions (ER_y)

JCI assessed the Emission Reductions (ER_y) in the specific CPA (BFP SSK-KE-01), according to the paragraph 18 of approved methodology AMS-III.AR, version 01.

JCI confirmed following equation (4) in paragraph 18 of AMS-III.AR. is properly applied for the Emissions Reduction calculation/1.8/ in the CPA-DD-KE-01.

$$ER_y = \sum N_{i,j} \times (BE_y - PE_{y,i,j}) \times (OF_{y,i,j}) \quad [\text{Equation (4) in AMS-III.AR.}]$$

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Where:

ER : Emission reductions in year y (tCO₂e)

N_{ij} : Number of project lamps distributed to end users of type i with charging method j

BE_y : Baseline Emissions , 0.11 tCO₂e is calculated for CPA-DD-KE-01 as shown above

$OF_{y,i,j}$: 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 . Assumed to equal to 100% for years 1,2,3 in the CPA-DD-KE-01, and the value determined at the 3rd year (2014) for the year 4,5,6,7, for Option 2 project lamps. For Option 1 project lamps, 100% for 2 years.

Number of project lamps distributed to end users (under various product types sold in) and the ex-ante number of operation lamps (N_{ij}) were planned throughout the whole period of the CPA-DD-KE-01 (10 years), by the spreadsheet with an assessable (unprotected) format/1.8/ according to the Guidelines on Completeness Check of Request for Registration”/3.14/

JCI validated the provided spread sheet/1.8/ by considering the technical specifications of the listed three product Types , and checked the correctness of the number of the project lamps to be sold in and the estimated number of operating of the project lamps under Option 1 (two years), and concluded the ex-ante Emission reductions in the spread sheet /1.8/ was correct, therefore it was correctly shown as 9,749 tCO₂ e as Annual average in the table at A.4.4.and B.5.3.of the revised CPA-DD-KE-01 ./1.6/

The PoA-DD and the CPA-DD-KE-01 defined the correction factor of each year, $CF_{OD,y}$, as an adjustment factor of actual operational days to be applied to equation (4) of CPA-DD-KE-01./1.6/ as well as in the spread sheet./1.8/ JCI verified the correctness of the ex-ante values of $CF_{OD,y}$ and the subsequent of the emission reductions values for each project lamps and each year, and concluded the emission reductions estimated accurately in an appropriate manner according to the approved methodology.

The result of the emission reductions calculation for each CPA are shown the below Table 9.

Table 9 Ex-ante Emission reductions of the CPA-DD-KE-01

Year	CDM-CPA-DD-KE-01-01./1.6/
	ER_y
2012	2,646
2013	15,223
2014	30,611
2015	33,292
2016	15,280
2017	438
2018	0

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Year	CDM-CPA-DD-KE-01-01./1.6/
	ER _y
2019	0
2020	0
2021	0
2022	0
Total emission reductions (tCO ₂ e)	97,490
Total number of crediting years	10
Annual average emission reductions (tCO ₂ e)	9,749

8. Additionality

8.1. Additionality of the Programme

JCI assessed on the additionality of the Project through the review of the PoA-DD and the CPA-DD-KE-01 and cross-checking of the evidences with the public information as well as discussion and observations during the on-site assessment.

The assessment has been implemented by applying the relevant additionality-related guidelines such as “**Guidelines on the Demonstration of Additionality of Small-Scale Project Activities (Version 09.0) , EB68 Annex 27**” /3.5/, “Guidelines for Objective Demonstration and Assessment of Barriers (version 01)”/3.7/, “General Guidelines for SSC CDM methodologies (version 18) ”/3.6/, “Standard for Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple Methodologies for Programme of Activities (Version 01.0)”/3.3/, and “**Guidelines for Demonstrating Additinoality of Microscale Project Activities (Version 04.0), EB68 Annex 26**”/3.8/.

The CME of the Project, Barefoot Power Pty Limited (BFP) demonstrated “*assessment and demonstration of additionality*” at A.4.3.of the PoA-DD by,

- (a) “*The proposed PoA is a voluntary coordinated action,*”and then
- (b) “*If the PoA implementing a voluntary coordinated action, it would not be implemented in the absence of the PoA*”

JCI crosschecked with the environmental act in Kenya, “Kenya Environment Management Coordination Act /4.1/” , and justified that there are no policies or mandatory regulation in Kenya which require households or small and medium enterprises to use LED based lighting systems, therefore JCI concluded it was credible that the statement of the PoA-DD on the above subject (a) as the Project is a voluntary coordinated action.

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Regarding the above subject (b), JCI confirmed that the CME (BFP) adequately demonstrated at A.4.3. of the PoA-DD about the compliance with the additionality-related eligibility criteria by ensuring the relevant guidelines, also at E.5.1 and E.5.2. of the PoA-DD about more specific criteria of the relevant guidelines for each CPA (either for micro-scale/3.8/ or for small-scale activities /3.5/), as well as for CME level /3.7/, thus the proposed PoA-DD complied with the requirement of demonstration of additionality, required at Para.7 (CPAs not implemented), Para.8 (micro-scale activity), Para.9.(barrier assessment) of the Standard /3.3/, therefore complied with additionality-related eligibility criteria required at Para.13.(f) of the Standard./3.3/

As for the said requirement by Para.7 (the absence of CDM) and Para.9 (barrier assessment) of the Standard, the PoA-DD demonstrated the barrier assessment at A.4.3. of the PoA-DD that “the access-to-capital” at the CME level was a key barrier for implementing the Project.

The PoA-DD demonstrated that the fossil fuel based lamps are common in sub-Sahara Africa including Kenya, and the introduction of LED based lighting systems have faced technology upgrade for development and supplying higher quality with longer life and affordable price for the target customers who have experienced spoiled LED products.

JCI cross-checked the published information on various illumination devices in Kenya such as by Lighting Africa /5.1/, and specific needs of good quality of LED based lighting system in Kenya /5.4//5.6//5.7//5.8//5.9//5.13/, thus JCI validated that the demonstration steps at PoA-DD was conducted in an appropriate manner, providing the background information for the needs for development higher quality LED products through series of supply chain of the project lamps from manufacturers, wholesalers, small retailers, to end- user level.

Regarding the quantitative assessment on the barrier of the project owner, JCI assessed with the provided evidences such as the loan agreement/7.3/and the company’s financial data./7.4 / JCI assessed the yearly trend of capital amount and loan amount of the CME (Barefoot Power Pty Limited) from 2009 to plan for 2012 through its financial data./7.4/

The annual loan amount was found to increase gradually from the same level of its capital amount at 2009 and became about one and a half times amount of its capital amount at 2011.

These loans were reported as about forty small angel investors loans with standard loan agreement conditions, as well as the ODA Fund for the CME as stated at Annex 2 of PoA-DD, which JCI confirmed with the affirmation letter /2.3/ that this was “ not result in a diversion of the ODA Fund and remain separate from and not counted towards the financial obligations of the European Commission under UNFCCC.”

The PoA-DD demonstrated at A.4.3.about the needs of higher quality with longer life LED project lamps to meet the specifications of the applied methodology, therefore a significant amount (about three times of the averaged capital amount from 2009 to 2011) of the one specific loan was agreed effective from 2011, which JCI confirmed with the external evidence/7.3/ that required the CME’s obligation of obtaining necessary approvals for implementation its carbon credit strategy.

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Therefore, JCI validated and concluded that this specific loan agreement/7.3/ with its conditions of the CDM had an significant impact on alleviating barriers demonstrated by the Project.

The sales amount expected for Kenya and Uganda, to which the project owner planned to apply for the CDM, would be about one third of the total sales amount of Barefoot Power Pty Limited, therefore it is apparent that this specific loan which is bound for the CDM projects (Kenya and Uganda) has an more than three times impact to applicable capital for operation in Kenya and Uganda among total operation of Barefoot Power Pty Limited.

In addition to the barrier of access-to-capital at CME level, JCI further assessed whether the proposed PoA would not be implemented at CPA level in the absence of CDM.

As described at PoA-DD under section A.2., the business plan and distribution model of the PoA project was that the project lamps were uniquely developed and manufactured and delivered by the CME (BFP) and each CPA will be only sales function either partly owned or fully owned by the CME company(BFP).

The CPA entities would not have occurred in the host country due to their access-to-capital barrier without the necessary capital raise by the CME, or due to no project lamps supply from the CME, because the CPA entities have to make the contractual agreements as defined at PoA-DD under sections A.2.(contractual agreement), A.4.2.2.(eligibility criteria for inclusion of CPA) and E.5.1. & E.5.2.(additionality for a SSC-CPA and Key criteria for assessing additionality of a SSC-CPA).

The CPA-DD-KE-01 also demonstrated such conditions for the inclusion of CPA under sections B.2. (Justification to be included in the PoA) and B.3. (Assessment and demonstration of additionality of SSC CPA).

JCI verified that these conditions for inclusion of CPA were implemented with the 1st CPA (BFP SSK-KE-01) through its contractual agreement with the CME/6.3/, and the financial information of SSK (the 1st CPA in Kenya)/7.15/, thus concluded that the proposed PoA would not to be implemented at CPA level in connection with the CME (BFP) who has the barrier of access-to-capital as demonstrated above.

JCI assessed the finance barrier faced by the CME (BFP) through verifiable data and evidences/2.3//7.3//7.4/, also the same barrier faced by the CPAs could be verified by the CME through their contractual relation to the CME/6.3/ and financial conditions as the PoA-DD demonstrated at Eligibility Criteria for inclusion of CPAs, thus the PoA complied in accordance with Para.5 of “Guidelines for Objective Demonstration and Assessment of Barriers”/3.7/. Therefore JCI concluded that the PoA is implementing a voluntary coordinated action, and it would not be implemented in the absence of CDM due to its access-to-capital barrier.

8.2. The starting date of the CPA

JCI confirmed by the first sales invoice document /7.16/ that the starting date of the project was identified as 09 December 2011 of the the specific CPA in Kenya (BFP SSK-KE-01) under the

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PoA as described at A.4.2.1. of CPA-DD-KE-01 , which was after the date of GSC (Global Stakeholders Consultation) of the Project as 07 September 2011.

JCI assessed the project timeline and confirmed that the starting date of the project was after the date of GSC, therefore, concluded that the Project complied with the condition for a CPA under the PoA project, according to the Procedures /3.9/.

9. Monitoring plan

JCI assessed the monitoring plan presented in the PoA-DD/1.2/ and CPA-DD-KE-01/1.6/ whether they complied with the requirements of the applied methodology (AMS-III.AR.. version 1.0) through the document review and interviews at on-site assessment.

1) Parameters to be monitored ex-post

JCI checked Data and parameters to be monitored by each CPA and Description of the monitoring plan for a CPA in section E.7 of the PoA-DD/1.2/ together with Operation, management and monitoring plan in section A.4.4 of the PoA-DD/1.2/, as well as Description of the monitoring plan in section B.6.1. of the CPA-DD-KE-01 /1.6/, with the relevant methodology, and confirmed that these parameters and procedures comply with those required to this kind of project.

Followings are the result of confirmation for the suitability of monitoring items and procedures including ex post monitoring survey provided in the applied monitoring methodology (AMS-III.AR.. version 1.0). /3.2/

Justification of the planned parameters in the DDs is shown in below Table 10, with comparison to the required parameters by the Methodology./3.2/

Table 10. Comparison between required parameters and planned parameter in the DDs

Required parameters by AMS-III.AR	Planned parameters in DDs	parameters	Justification
1. Number of project lamps distributed to end users	Number of project lamps to end users	$N_{i,j}$	OK
2. Data specified by Para.20(b) of Methodology for lamps per Option 2.	The date on which the lamps are distributed to end users	$DATE_{m,start}$	OK
3. Ditto	The date on which project lamps are manufactured	$DATE_{man,m}$ $DATE_{man,j}$	OK
4. The parameter at the Sampling survey	Percentage of project lamps under operation in the sample survey at the 3rd year of crediting period	P_{usage}	OK
5. Other data to unambiguously identify each recipient of a project lamp	Receipt and Warranty card signed by end user		OK

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Ditto	Quantity of lamps sold		OK
Ditto	Serial number of each lamp		OK
Ditto	Date of sale		OK
Ditto	The district code and Name of distributor or dealer		OK
Ditto	Customer details including		OK

In addition, the project participant stated that the data item 2 and 3 of the above Table 10 would be applied in case that the actual date of purchase is not available, by applying “Lag_Time” defined in section E.6.2. of the PoA-DD/1.2/, which was agreed under the prescribed conditions at SSC WG36 (SSC_609) /3.15/.

JCI cross-checked the note of SSC WG36 (SSC_609) /3.15/, and justified the below equation can be applied under the said prescribed conditions to estimate $DATE_{j,start}$ from the known data of “Lag_Time” and $DATE_{man,j}$, where “Lag_Time” could be estimated by the known data as defined in section E.6.2. of the PoA-DD/1.2/

$$DATE_{j,start} = DATE_{man,j} + \text{“Lag_Time”}$$

Thus, JCI confirmed that the monitoring parameters are appropriately planned according to **Para.19**, 20 and 21 of the approved methodology AMS-III.AR. /3.2/

2) Monitoring of Data/Parameter

The PoA-DD stated that the sampling plan for monitoring survey was designed in line with the *Standard for sampling and surveys for CDN project activities and programme of activities* /3.4/. The PoA-DD also stated the monitoring survey would be conducted in the third year of each CPA to determine the percentage of project lamps distributed to end users that are operating and in service.

JCI reviewed the sampling design steps described at E.7.2 of the PoA-DD/1.2/. The PoA-DD/1.2/ appropriately planned to determine "Percentage of project lamps under operation “ (P_{usage}) by the sample survey at the 3rd year of crediting period, according to Para.21 of the Methodology./3.2/ **However the project lamps of the revised CPA-DD(KE)/1.6/ were only Option 1 (defined at Para.10 of the applied methodology/3.2/), thus no confirmation by sampling test is required.**

It's Survey Principle was justified with the requirement by Para.22 of the Methodology,/3.2/ as shown at the below Table 11.

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Table 11. Justification on the sampling design of the planned Monitoring Survey of PoA-DD

Planned criteria in PoA-DD		Justification by the required principles by AMS *, and STANDARD *
<i>A) Sampling Design Objectives</i>	Survey to determine P _{usage} in the third year of each CPA	Comply with AMS.Para.22 (f), and STANDARD Appendix 3.
<i>Reliability requirement</i>	Confidence / precision 90/10	Comply with AMS.Para.22 (a)
<i>Target Population</i>	Recipients of project lamps	Comply with AMS.Para.1
<i>Sampling method</i>	Multistage sampling with a random selection of District and a random selection of recipients within District	According to STANDARD Para.12 and Appendix 2, and comply with AMS.Para.22 (b) and STANDARD Para.20(b)
<i>Sample size</i>	Equation specified in PoA-DD	Comply with AMS.Para.22 (a) and also with STANDARD para.20.
<i>Sampling Frame</i>	Recipients were recorded in the project data base which would be monitored with Annex 4 of PoA-DD	Comply with AMS.Para.22
<i>B) Data Field Management Objectives and Data to be collected</i>	Survey by site visits in the third year of each CPA with Questionnaire listed in Annex 4 of PoA-DD	Comply with AMS.Para.22 (d) and (f), and by STANDARD Appendix 3.
<i>Quality assurance and quality control</i>	Samples draw by an independent entity, surveyed by trained surveyors, data review by one lead surveyor	Quality control and assurance was judged to be adequate mechanism for avoiding bias
<i>Procedures for administering Data Collection and Minimizing Non-sampling Errors</i>	Procedures to ensure to provide reliable data by training the independent surveyors	Procedures were adequate to ensure to provide reliable data
<i>Procedures to administer data collections</i>	Detailed survey procedures were listed.	Procedures to ensure to provide unambiguous data collections were confirmed with Questionnaire Template at Annex 4 of PoA-DD
<i>Procedures for non-</i>	Procedures to treat and cover	Comply with AMS.Para.22 (e)

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<i>response</i>	non-response replies	
<i>Data analysis</i>	The role for data analysis and data archives were defined	The frame was well defined
<i>Implementation</i>	The role of implementing Parties were defined	Implementation frame was well defined

Note * : AMS refers to AMS -III.AR Version01./3.2/

STANDARD refers to Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities” (Version 02.0)./3.4/

The *Sample size* determination will be estimated by the following formula, which JCI justified as applicable to the sampling method for the proposed PoA activity as guided by STANDARD./3.4/ The each CPA will defined the parameters in case it applies the project lamps under Option 2 (defined at Para.11 of the applied Methodology/3.2/).

$$c \geq \frac{\frac{SD_B^2}{p^2} \times \frac{M}{M-1} + \frac{1}{u} \times \frac{SD_w^2}{p^2} \times \frac{(\bar{N} - \bar{u})}{(N-1)}}{\frac{0.1^2}{1.645^2} + \frac{1}{M-1} \times \frac{SD_B^2}{p^2}}$$

The DOE will validate the proposed sampling plan by each CPA which applies the project lamps under Option 2, in accordance with the requirement under Para.20 of STANDARD./3.4/

JCI confirmed the designed plan and procedures addressed in the PoA-DD were well managed and fully comply with Appendix 4 of the Sampling Standard/3.4 / also with Para.20, 21 and 22 of AMS-III.AR.version01. JCI further confirmed with the monitoring manual compiled by the project participant/7.14.2/, and judged the present CME (BFP) and CPA entity, SSK are capable to manage the monitoring plan by considering the present pre-marketing and sales activity observed and interviewed during the on-site assessment./7.15/

10. Sustainable development

JCI confirmed that the LoA issued by DNA of the host party/2.1/; Republic of Kenya confirmed the contribution of the proposed CDM project activity to the sustainable development of the host Party, which has been already described in Section IV 1. Approval and 2. Participation.

11. Local stakeholders' consultation

According to the description in Section D. of PoA-DD/1.1/, the Local Stakeholders' Consultation was done at CPA level.

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Meanwhile in the sections D.2./D.3./D.4. of the CDM-SSC-CPA-DD-KE-01, the details of public notification (notice by a national news paper), stakeholders' meeting agenda and content including Q&A with the local stakeholders, and the attended background of local stakeholders were reasonably considered relevant for the Project and complete.

JCI confirmed with the detail information of the records as evidences related to stakeholders' consultation, including the photos of each meeting. /7.1//7.2/

The CPA-DD-KE-01 also covered how the project participant has taken due account of the comments raised during the stakeholders' consultation, focusing on the needs of further improvement of the technical performance of the project lamps, involvement of local communities in the distribution plan, incentives to end users, utilization of carbon credit revenue, and communication with the end users, among which JCI confirmed that the project participant has taken some steps through the interview during the on-site assessment./7.15/

JCI conducted the interview during the on-site assessment from 22 to 26 November 2011 with household families, small business manager, distributors, shop keeper in Maai Mahiu Town (about 80 km north from Nairobi city of Kenya).

The interviewed stakeholders participated to the LED lamp utilization and distribution, therefore JCI could sensor a part of the local stakeholders relevant for the Project.

Social, economical and ecological effects of the LED lamps have been confirmed with the meeting with the stakeholders and the interview and discussions./7.15/

Summary of the meeting is as follows.

- All of the households have been satisfied with stop of kerosene usage.
- All confirmed the benefit of LED lamp illumination with photovoltaic system.
- Interviewees stressed the positive effect on work environment at house or small business, extended time for students to do their home works, positive effect on expense of kerosene and positive effect on health. The LED lamps were also used in farm work and as safety torches.
- The interviewees explained the no access to public electricity supply nor benefit to connect grid supply due to its expense and supply quality.

The initial purchasing payment of the LED lamps with photovoltaic system was still a big amount for most of the average households, so most users applied a micro-finance for purchasing the lamps.

Based on the above, JCI confirmed and validated that the PoA is basically supported by the majority of local stakeholders, and gave no significant adverse impacts both on social and natural environment, and instead contributed to the improvement of environment and infrastructure.

12. Environmental impacts

The project reduces the consumption of non-renewable natural resources such as fossil fuels by replacing kerosene lamps with the LED project lamp, which consists of a LED lamp, a rechargeable battery and a photovoltaic panel as a set of unit.

Accordingly, there are no significant anticipated negative impacts on the environment and /or on people through this programme.

According to the description in Section C. of PoA-DD/1.1/, the environmental analysis was done at CPA level. The project will replace kerosene-based lighting with the designed solar lamps in Kenya.

In the section C.3. of CPA-DD-KE-01, it was described that the government of Kenya did not require an EIA or any other assessment (i.e. basic assessment, scoping report) for this type of activities by law.

JCI confirmed that the project activity complied with environmental regulations of the country./4.1 //4.2/

The other regulations in Kenya for the project activity to comply with were described at C.2. of the CPA-DD-KE-01, which JCI verified with the local regulations on disposal of batteries./4.2/

The import certificate of the project lamps with batteries would be collected by project participant to comply with Kenya Bureau of Standards /4.5 /, which JCI verified with the actual import certificates of the project lamps issued by Kenya Bureau of Standard dated 21/10/2011./6.2/

The project participant would also contract with the licensed recycling company in Kenya for disposal of the batteries according the local Environment Acts /4.1//4.2/, and JCI confirmed with the Minutes between the project participant and the licensed disposer/6.1/ for the disposal.

JCI validated and concluded that the project participant has committed himself to comply with the local requirement on the environmental regulations as stated in the CPA-DD-KE-01.

13. Comments by Parties, Stakeholder through the consultation process

SSC-PoA-DD version 01//1.1/, generic SSC-DD version 01/1.3/, and the first specific CPA (CDM-SSC-CPA-DD-KE-01) version 01/1.5/ were made publicly available on UNFCCC CDM website, and Parties, stakeholders and NGOs were through the website invited to provide comments during a 30 days period from 07 September 2011 to 06 October 2011.

And no comments were received.

End of document