VALIDATION REPORT

PROGRAMME OF ACTIVITY

South Africa Renewable Energy Programme (SA-REP)

26 September 2012

Japan Consulting Institute

REPORT NO. JCI-CDM-VAL-11/153

REVISION NO. 00

Validation Report No.	JCI CDM VAL-11/153
Date of revision	-
Project name	South Africa Renewable Energy Programme (SA-REP)
Project Participant(s) / Organization	Standard Bank Plc (CME) AE-AMD Independent Power Producer 1 (Pty) Limited (CPA-1)
Host Country	South Africa
Project site Location	Pixley ka Seme district municipality, Northern Cape province (CPA-1)
Methodology	AMS-I.D. Version 17
Scale	☐ **Large Scale** ☑ **Small Scale**
Sectoral Scope/ Technical Area	**Sectoral Scope :** 1 / **Technical Area:** 1.2
GHG reducing measure/ Technology	Grid connected renewable electricity power generation
Emission Reduction estimated	(First CPA) 24,758 t-CO2e/year (average)

Validation Team	Name
Team leader	Shigeo Aoki
Team member	Toyoaki Tsunoda

Technical Reviewer	Masaki Okada

Conclusion of validation
☑ Positive opinion: JCI's opinion is that the proposed CDM project meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria and correctly applies the methodology. Hence, JCI provides a positive opinion and requests the registration of the proposed project as a CDM project activity.
☐ Negative opinion: JCI's opinion is that the proposed CDM project does not meet all relevant UNFCCC requirements for the CDM and all relevant host country criteria and the supportive evidences are not provided sufficiently . Hence, JCI will not provide a positive opinion and requests the registration of the proposed project as a CDM project activity.

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Approved by	Checked by
Akio Yoshida Executive Director , JCI CDM Center	Hideyuki Sato Evaluation Group Manager, JCI CDM Center

Abbreviations

AE-AMD IPP	AE-AMD Independent Power Producer 1 (Pty) Limited (CPA-1 PO)
AMS-I.D.	AMS-I.D. "Grid connected renewable electricity generation" (version 17)
BM	Build Margin
CAL	Carbon Africa Limited (CDM Consultant)
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEF	Carbon Emission Factor
CERs	Certified Emission Reductions
CL	Clarification Request
CM	Combined Margin
CME	Coordinating and Managing Entity
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
CPA	Component Programme Activity
CPA-1	First CPA project (Greefspan 11.029 MW Solar PV Project)
DD	Design Document
DoE	Department of Energy Republic of South Africa
DOE	Designated Operational Entity
DOEA	Department of Environmental Affairs
DNA	Designated National Authority
EB	Executive Board
EIA	Environmental Impact Assessment
EPC	Engineering, Procurement and Construction
ERPA	Emission Reduction Purchase Agreement
ERs	Emissions Reductions
Eskom	Electricity Supply K(C)ommission
FAR	Forward Action Request
FSR	Feasibility Study Report
GHG	Greenhouse Gas
IRR	Internal Rate of Return
JCI	Japan Consulting Institute
KP	Kyoto Protocol
LSC	Local Stakeholder Consultation
LoA	Letter of Approval
MoC	Modalities of Communication
NEMA	National Environmental Management Act
NERSA	National Energy Regulator of South Africa
ODA	Official Development Assistance
OM	Operating Margin
O&M	Operation & Maintenance
PoA	Programme of Activity
PP	Project Participants
PPA	Power Purchase Agreement
SA-REP	South Africa Renewable Energy Programme (SA-REP) (PoA project)
RSA	Republic of South Africa
SBP	Standard Bank Plc (PoA CME)
SSC	Small-Scale CDM
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Clean Development Mechanism Validation and Verification Standard

CONTENT

I. EXECUTIVE SUMMARY - VALIDATION OPINION 5
II. INTRODUCTION OF VALIDATION 5
1. Objective of CDM validation 5
2. Validation approach 6
3. Means of validation 6
3.1 Corrective action requests, clarification requests and forward action requests 6
4. Global Stakeholder Consultation 7
III. VALIDATION WORK 8
1. Validation Team 8
2. Appointment certificate of the DOE's validation team member 8
3. Quality Control within the team of the validation process 8
4. Desk Review 8
5. Follow-up actions (Interviews with relevant stakeholders in the host country) 11
IV. VALIDATION FINDINGS 12
1. Approval and authorization 13
2. Modalities of Communication 14
3. Management System 14
4. PoA/CPA design document 14
5. Description of a PoA/CPAs 15
6. Additionality of a project activity 16
6.1 Demonstration of additionality of the PoA as a whole 16
6.2 Start date of a PoA/CPA 17
6.3 Identification of alternatives 17
6.4 Investment analysis 17
6.5 Barrier analysis 17
6.6 Common practice analysis 18
7. Eligibility criteria for inclusion of a CPA in the PoA 18
8. Application of the selected baseline and monitoring methodology 22
8.1 Application of multiple methodologies 22
8.2 Applicability of the selected baseline and monitoring methodology to the project activity 23
8.3 Boundary 25
8.4 Description of baseline scenario 26
8.5 Estimation of emission reductions of a generic CPA 27
8.6 Monitoring plan 28
9. Environmental impacts 29
10. Local stakeholder consultation 30

Appendix A: Validation Protocol
Appendix B: Certificate of Appointment of Validation Team

I. EXECUTIVE SUMMARY - VALIDATION OPINION

Japan Consulting Institute (JCI) has performed a validation of the "South Africa Renewable Energy Programme (SA-REP)". 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 stated criteria.

The host country is South Africa (unilateral) and fulfills the participation criteria and have approved the project and authorized the project participants. The DNA from the South Africa confirmed that the project assists in achieving sustainable development.

The project correctly applies AMS-I.D. "Grid connected renewable electricity generation" version 17 and referenced Tools.

JCI provides the validation opinion that the all of coverage for the project components or issues are deemed being validated through the validation process.

The total emission reductions from the first CPA under the proposed PoA are estimated to be on the average 24,758 CO_2e per year over the 7 years for the first crediting period. The starting date of crediting period is from 01/06/2014. The estimated emission reduction has been checked based on the validation work and JCI considers all relevant assumptions for the above estimated emission reduction is appropriate.

In summary, it is JCI's validation conclusion that the PoA of "South Africa Renewable Energy Programme (SA-REP) in South Africa" as described in the latest version of PoA-DD version 07 dated 21/09/2012 /4/ which includes the generic CPA-DD and the specific real case CPA-DD (first CPA) version 06 dated 21/09/2012 /5/, meets all relevant UNFCCC requirements for PoA and all relevant host country criteria and correctly applies the baseline and monitoring methodology AMS-I.D. "Grid connected renewable electricity generation" version 17 /63/.
JCI thus provides a positive validation opinion and the requests for the registration of the proposed project as a PoA.

II. INTRODUCTION OF VALIDATION

The Standard Bank Plc has commissioned JCI to perform a validation of the South Africa Renewable Energy Programme (SA-REP) project (hereafter called "the project").

This report summarizes the findings of the validation of the project, performed on the basis of UNFCCC criteria for the CDM, 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, (the simplified modalities and procedures for small-scale CDM project activities) and the subsequent decisions by the CDM Executive Board.

1. Objective of CDM validation

The objective of the validation is to have an independent assessment of proposed project activities against the applicable CDM requirements as set out in decision 3/CMP.1, its annex and relevant decisions of the COP/MOP, on the basis of the project design document.

In particular, the project's baseline, monitoring plan, and the project's compliance with relevant UNFCCC and host Party criteria are validated in order to confirm that the project design, as documented, is sound and reasonable and meets the identified criteria.

Validation is a requirement for all CDM projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of certified emission reductions (CERs).

2. Validation approach

The validation approach is to determine whether the proposed project activity complies with the requirements of paragraph 37 of the CDM M&Ps, the applicability conditions of the selected methodology and guidance issued by the Board and to assess the claims and assumptions made in the POA, CPA-DD.
The validation is not meant to provide any consultancy towards the project participants.
However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the project design.

3. Means of validation

JCI applies the means of validation specified throughout the VVS and where appropriate standard auditing techniques, including, but not limited to:

(a) Document review, involving:

(i) A review of data and information;

(ii) Cross checks between information provided in the PDD (PoA, CPA-DD) and information from sources other than those used, if available, the DOE.s sectoral or local expertise 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 checks between information provided by interviewed personnel (i.e. by checking sources or other interviews) to ensure that no relevant information has been omitted.

(c) Reference to available information relating to projects or technologies similar to the proposed CDM project activity registered and under validation; and

(d) Review, based on the approved methodology being applied, of the appropriateness of formulae and correctness of calculations.

3.1 Corrective action requests, clarification 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 shall ensure that these issues are correctly identified, discussed and concluded in the validation report.

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

JCI shall raise 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 shall resolve or "close out" CARs and CLs only if the project participants modify the project design, rectify the PDD (PoA, CPA-DD) or provide adequate additional explanations or evidence that satisfies the DOE's concerns. If this is not done, the DOE shall not recommend the project activity for registration to the CDM Executive Board.

JCI shall report on all CARs, CLs and FARs in its validation report. This reporting shall be 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 PDD (PoA, CPA-DD) 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 VVS, the PoA-DD, CPA-DD Guidelines and the PoA-DD, CPA-DD templates. Each section is then further sub-divided. ✧ Reference : Gives reference to documents where the checklist question or item is found. Paragraph No. of VVS 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 Actions, Clarification Requests and Forward Action Requests
✧ Clarifications and corrective action requests : If the conclusions from the draft Validation are a **CAR,** a **CL** or a **FAR**, these should be listed in this section. ✧ 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.

4. Global Stakeholder Consultation

JCI made the PoA-DD, CPA-DD version 01 of 23/02/2012 of the project activity under consideration publicly available on UNFCCC website and Parties, stakeholders and NGOs were through the CDM website invited to provide comments during a 30 days period from 13/03/2012 to 11/04/2012.

As a result of consultation, no comment was received during above 30 days period.

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.

Role/Qualification	Name	Qualified Technical Areas related to the Project	On-site Visit
All relevant issues / Team Leader	Shigeo Aoki	1.2 Energy generation from renewable energy source	✔
CDM auditor / Team Member	Toyoaki Tsunoda	------	✔

Details of the technical reviewer are shown in below Table.

Name	Qualified Technical Areas related to the Project
Masaki Okada	1.2 Energy generation from renewable energy source

2. Appointment certificate of the DOE's validation team member

The certificate of appointment of validation team member is 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 for the assurance of being in compliance with the applicable requirement of the latest version of VVS.

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 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 the internal audit team and 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

JCI performed 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 PDD and information from sources other than that used, if available, and if necessary independent background investigations

The following table outlines the documentation reviewed during the validation:

No.	Title
	PDD, F/S Report, EIA Report
/1/	SSC-PoA-DD, South Africa Renewable Energy Programme (SA-REP) version 01 dated 23/02/2012 (for GSC)
/2/	SSC-CPA-DD, SA-REP – Greefspan 11.029 MW Solar PV Project (CPA-1) version 01 dated 23/02/2012 (for GSC)
/3/	Generic SSC-CPA-DD, SAREP – [project location, installed capacity, technology] - [CPA-XX], version x dated dd/mm/yyyy
/4/	SSC-PoA-DD, South Africa Renewable Energy Programme (SA-REP) version 07 dated 21/09/2012
/5/	SSC-CPA-DD, SA-REP – Greefspan 11.029 MW Solar PV Project (CPA-1) version 06 dated 21/09/2012
/6/	Energy yield assessment report by AE-AMD Renewable Energy (Pty.) Ltd. dated 03/10/2011
/7/	Review of solar irradiation data and yield assessment by Pöyry Energy S.r.L. dated 01/11/2011
/8/	Project description report by AE-AMD Renewable Energy (Pty.) Ltd. on March 2011
/9/	Environmental Impact Assessment (EIA) Report by Van Zyl Environmental Consultants CC on May 2011
	Letter of Approval
/11/	Letter of Approval by South Africa DNA dated 19/09/2012
/12/	Authorization Letter for Environmental Impact Assessment by DOEA 28/09/2011
	Contract, Agreement
/21/	Agreement with CDM Consultant dated 02/12/2011
/22/	Land use agreement on June/2010
/23/	Modalities of Communication (MoC) statement (signed)
	Documentary Evidence, Records
/31/	Construction Schedule for Greefspan project
/32/	Operation and Maintenance Scope of services
/33/	Training Program for Operation and Maintenance
/34/	Official Development Assistance (ODA) by CPA-1 developer to UNFCCC dated 17/05/2012
/35/	South Africa Renewable Energy Feed-in Tariff (REFIT) Regulatory Guidelines (26/03/2009)
/36/	Eskom Annual Integrated Report 2011
/37/	Eskom Transmission Ten-Year Development Plan 2012-2021
/38/	The Future of South African Coal: Market, Investment and Policy Challenges, PESD Working Paper #100 on January 2011

No.	Title
/39/	2006 IPCC Guidelines for National Greenhouse Gas Inventories
/40/	Emission Reduction calculation spreadsheet (for CPA-1 Greefspan project)
/41/	Minutes for EIA Public meeting held on 13/04/2011 dated 06/05/2011
/42/	Invitation of Stakeholders Meeting held on 03/02/2012
/43/	Sample of questionnaire for local stakeholder consultation
/44/	On-site visit summary
	Drawings
/51/	General arrangement drawing for Greefspan project
/52/	Single Line Diagram for Greefspan project
	Methodology, Tools, Guidance, Guidelines and Manual of UNFCCC
/61/	Glossary of CDM terms (Version 06)
/62/	Clean Development Mechanism Validation and Verification Standard (Version 02.0)
/63/	AMS-I.D Grid connected renewable electricity generation (Version 17)
/64/	Guidelines on the demonstration of additionality of small-scale project activities (Version 09.0)
/65/	General guidelines to SSC CDM methodologies (Version 17)
/66/	CDM-SSC-PoA-DD Form (Version 02.0)
/67/	CDM-SSC-CPA-DD Form (Version 02.0)
/68/	Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities (Version 01.0)
/69/	Clean Development Mechanism Project Standard (Version 01.0)
/71/	Guidelines for demonstrating additionality of microscale project activities (Version 04)
/72/	Guidelines on assessment of de-bundling for SSC project activities (Version 03.0)
/73/	Guidelines on additionality of first-of-its-kind project activities (Version 02.0)
/74/	Guidelines for completing the programme design document (CDM-PoA-DD) form for small-scale CDM PoA (Version 02.0)
/75/	Guidelines for completing the component project design document (CDM-CPA-DD) form for small-scale CDM CPA (Version 01.0)
/76/	Guidelines on the assessment of investment analysis (Version 05.0)
/77/	Tool to calculate the emission factor for an electricity system (Version 02.2.1)
/78/	Tool to calculate project or leakage CO2 emissions from fossil fuel combustion (Version 2)
/79/	Tool for the demonstration and assessment of additionality (Version 06.1.0)
	General local References
/81/	South African National Standard NRS 057:2009 - Code of practice for electricity metering
/82/	National Energy Regulator Act, 2004 (South Africa)
/83/	Electricity Regulation Act No.4 of 2006- Electricity Regulations on New Generation Capacity (30/11/2010)

No.	Title
/84/	Electricity Regulation Act No.4 of 2006- Electricity Regulations on the Integrated Resource Plan 2010-2030 (06/05/2011)
/85/	National Environmental Management Act, 1998 (ACT NO. 107 of 1998), EIA Regulations (2010)
/86/	Environmental Impact Assessment (EIA) Regulations 2006

Main changes in the PoA, CPA-DDs between the original version published for the 30 days stakeholder commenting period and the final version submitted for registration are summarized in the table below:

Subject and section in the PoA-DD & CPA-DD	**Original content in the PoA-DD /1/ & CPA-DD /2/**	**Revised content in the PoA-DD /4/ & CPA-DD /5/**	**Issued CAR or CL** **Relevant methodology, tool, guidance, or guidelines applied**
PDD Form	VVM Track Form	VVS Track Form	PDD form by EB66 and EB67
Start date of the PoA, Section D.1	01/01/2012	27/02/2012	CL-2 Glossary of CDM terms (version 06, EB 66, Annex 63)
Title of the CPA, Section A.2	SAREP – Greefspan 10 MW Solar PV Project	SA-REP – Greefspan 11.029 MW Solar PV Project	-
Description of the CPA, Section A.3	Capacity: 10 MW Plant load factor: 30.7% Generating electricity: 26,967 MWh annually	Capacity: 11.029 MW Plant load factor: 25.9% Generating electricity: 26,161 MWh annually	-
Annual emission reduction, Section A.3	26,128 tCO2	24,758 tCO2/y	-
Start date of the CPA, Section A.8.1	25/05/2012	01/01/2013	Glossary of CDM terms (version 06, EB 66, Annex 63)
Expected operational lifetime of the CPA, Section A.8.2	20 years	25 years	-
Start date of the crediting period of the CPA, Section A.9.1	01/04/2013	01/06/2014	-

5. Follow-up actions (Interviews with relevant stakeholders in the host country)

The on-site visit and interviews with project stakeholder were held from 09 to 11 May 2012 at the project site in Johannesburg, Pretoria and Pixley ka Seme district municipality, Northern Cape province (for CPA-1 Greefspan project) in South Africa, by Shigeo Aoki /Team Leader and Toyoaki Tsunoda /Team member. The names of interviewees are listed below:

List of interviewees

Ref. No.	Date	Organization/ Attendance	Topics
/44/	2012/05/09	**AE-AMD Independent Power Producer 1 (Pty) Limited (AE-AMD IPP)** (CPA-1 Project Owner): Dr. Tamuka Kaseke Mr. Charles Berrington **Carbon Africa Limited (CAL)** (CDM Consultant & POA, CPA-DD Author): Mr. Adriaan Tas Mr. Carlos Guerrero	➢ Introduction of JCI as DOE ➢ Introduction of CPA-1 PO and the Project ➢ Discussion on the project timeline and documents to be assessed based on the Documents List prepared by JCI
		Van Zyl Environmental Consultants (EIA Report Author): Ms. Irme Van Zyl	➢ CPA EIA report summary and opinion
		Department of Energy Republic of South Africa (DoE) (DNA of South Africa): Ms. Lindiwe Olga Chauke Mr. Ndiafhi Patrick Tuwani Mr. Takalani Martin Rambaur	➢ Approval process and issuance of LoA
		National Energy Regulator of South Africa (NERSA) (Energy regulator of South Africa): Mr. Mondli Shozi Mr. Sandile Jacobs Ms. Bongi Masemola Mr. Siphiwe Khunalo	➢ Energy regulator policy, generation mixture, etc.
/44/	2012/05/10	**Siyancuma Municipality** Mr. Ronnie Stadhones	➢ CPA project site survey (Greefspan)
		AE-AMD IPP Mr. Charles Berrington	➢ Public meeting and opinion on the project
		Local Resident Mr. Pieter Van Nickerk	➢ EIA comments and opinion on the project
/44/	2012/05/11	**AE-AMD IPP** Dr. Tamuka Kaseke **CAL** Mr. Adriaan Tas Mr. Carlos Guerrero	➢ Discussion on FSR, Initial Findings and review of POA, CPA-DD and Document List ➢ Summary of Interviews and Discussions

IV. VALIDATION FINDINGS

The findings of the validation are stated in the following sections. The validation criteria (requirements), the means of verification and the results from validating the identified criteria are documented in more detail in the validation protocol in Appendix A.

The final validation findings relate to the project design as documented and described in the revised and resubmitted project design documentation.

Findings issued through the validation

JCI issued three (3) CARs, two (2) CLs and no FAR for the PoA, and two (2) CARs, twelve (12) CLs and one (1) FAR for the CPA as shown in the Validation Protocol, Appendix A of this report. Through critical assessment on the presented evidences, using local knowledge and sectoral and financial expertise, all the CARs and CLs were resolved and then closed and one FAR remained as shown in the Table 2 of the Appendix A.

Major issues and its resolution process through the CARs and CLs are described in following items according to VVS /62/.

1. Approval and authorization

1) Approval

The project is without an Annex I Party being involved at the stage of registration request (unilateral project). The PoA-PDD /4/ reports only host Party in Section A.4.

JCI has received the Letter of Approval (LoA) from the project participant (PP), Standard Bank Plc, which was clearly referenced by the letter itself and all supporting documentations;

- DNA of Republic of South Africa (RSA) issued the LoA dated on 19/09/2012 /11/

JCI has confirmed the approval of the project with the interview with the Department: Energy Republic of South Africa (DoE) /44/, who is the DNA of RSA and, thus, the LoA is authentic. JCI concluded that the LoA confirmed the followings;

1) DNA of RSA approved the “South Africa Renewable Energy Programme (SA-REP)” of Standard Bank Plc.
2) The RSA has ratified the Kyoto Protocol.
3) The proposed CDM project activity contributes to the sustainable development of the RSA, as Host country.
4) Participation is voluntary.
5) The LoA refers to the precise proposed CDM project activity title in the PDD being submitted for registration.

There found no indication during the validation process that the project uses the official development assistance funding for RSA.

JCI has concluded that the LoA is credible and fully complies with the requirements by the CDM.

2) Authorization

JCI confirmed that the project participant is Standard Bank Plc d as being listed (unilateral project) in tabular form in Section A.4 of the PoA-DD /4/, and that this information is consistent with the contact details provided in Appendix 1 of the PoA -DD /4/. It is also confirmed that no entities other than those approved as project participants are included in these sections of the PoA -DD /4/.

As described in 1) Approval above, the project participant is authorized with the LoA issued by the DNA of RSA as a voluntary participant to the project activity.

3) Contribution to sustainable development

As described in 1) Approval above, JCI has confirmed that the host Party RSA’s DNA confirmed the contribution of the project to the sustainable development of the host Party.

2. Modalities of Communication

JCI has confirmed in writing that it has performed due diligence on the MoC statement in accordance with the requirements established in the VVS /62/. JCI has also confirmed in writing that the MoC statement complies with all relevant forms and requirements.

3. Management System

1) Coordinating/managing entity and participants in a PoA

As per the Clean Development Mechanism Project Standard (version 01.0) /69/, the CME, Standard Bank Plc, established and described in the Section C of the PoA-DD /4/ the distinct and transparent description of the operational and management arrangements for the implementation of the proposed CDM PoA in accordance with requirements by the "Standard for demonstration of additionality, development of eligibility criteria and application of multiple technologies for programme of activities" (version 01.0) /68/.

1) The management structure and the appointment and responsibilities of the personnel (programme officer) involved in the inclusion of CPAs and the management of the CME are appropriately defined in the PoA-DD /4/.
2) The CME will conduct the training and capacity building exercises for the programme officer and any other personnel.
3) The Procedures for technical review of inclusion of CPAs are appropriately defined in the PoA-DD /4/.
4) The procedure to avoid double counting is clearly stipulated in the PoA-DD /4/.
5) The record keeping system for each CPA under the PoA is clearly stipulated in the PoA-DD /4/.
6) The measures for continuous improvement of the PoA management system are appropriately defined in the PoA-DD /4/.
7) The provision of the agreements between the CME and each CPA is appropriately defined in the PoA-DD /4/. The PoA participation agreement will include a confirmation that the entity implementing the CPA is aware and agrees that the CPA is being subscribed to the PoA.

JCI has concluded that the operational and management arrangements has been established by the CME appropriately for implementation of each CPA under the proposed PoA in accordance with the "Standard for demonstration of additionality, development of eligibility criteria and application of multiple technologies for programme of activities" (version 01.0) /68/.

2) Entity/individual responsible for CPA

JCI confirmed that the **e**ntity/individual responsible for CPA is stipulated in the CPA-DD /5/. Individual CPAs will be developed and implemented by CPA entities. The CPA entities will be responsible for the operation and maintenance of the renewable energy power plant and will enter into a power purchase agreement. Each CPA entity will also enter into a PoA participation agreement with the CME for participation in the proposed PoA. The **e**ntity responsible for CPA-1 (Greefspan 11.029 MW Solar PV Project) is AE-AMD Independent Power Producer 1 (Pty) Limited. JCI confirmed the **e**ntity/individual responsible for CPA stipulated by the CME is appropriate.

4. PoA/CPA design document

Through desk reviews and Q&A sessions with the PoA-DD and CPA-DD author, JCI confirmed that the PoA-DD version 07 dated 21/09/2012 /4/ and the CPA-DD version 06 dated 21/09/2012 /5/are described based on and referring to the following relevant tools, guidance, guidelines, and manual:

(1) Glossary of CDM terms (Version 06) /61/

(2) CDM VVS (Version 02) /62/

(3) AMS-I.D "Grid connected renewable electricity generation" (version 17) /63/

(4) Guidelines on the demonstration of additionality of small-scale project activities (Version 09.0) /64/

(5) General guidelines to SSC CDM methodologies (Version 17) /65/

(6) CDM-SSC-PoA-DD Form (Version 02.0) /66/

(7) CDM-SSC-CPA-DD Form (Version 02.0) /67/

(8) Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities (Version 01.0) /68/

(9) Clean Development Mechanism Project Standard (version 01.0) /69/

(10) Guidelines for demonstrating additionality of microscale project activities (Version 04) /71/

(11) Guidelines on assessment of de-bundling for SSC project activities (Version 03.0) /72/

(12) Guidelines on additionality of first-of-its-kind project activities (Version 02.0) /73/

(13) Guidelines for completing the programme design document (CDM-PoA-DD) form for small - scale CDM PoA (Version 02.0) /74/

(14) Guidelines for completing the component project design document (CDM-CPA-DD) form for small-scale CDM CPA (Version 01.0) /75/

(15) Guidelines on the assessment of investment analysis (version 05.0) /76/

(16) Tool to calculate the emission factor for an electricity system (version 02.2.1) /77/

(17) Tool to calculate project or leakage CO2 emissions from fossil fuel combustion (version 2) /78/

(18) Tool for the demonstration and assessment of additionality (version 06.1.0) /79/

The project design was described using the latest CDM-SSC-PoA-DD Form (Version 02.0) /66/ as shown in the PoA-DD version 07 dated 21/09/2012 /4/ and (7) CDM-SSC-CPA-DD Form (Version 02.0) /67/ as shown in the CPA-DD version 06 dated 21/09/2012 /5/, which were confirmed through comparison with the templates listed on the UNFCCC website.

As described above, JCI confirmed and concluded that the PoA-DD /4/ and the CPA-DD /5/are compiled with use of the appropriate format and are described based on appropriate tools, guidelines, manual and guidance which are specified and requested by the CDM procedures.

5. Description of a PoA/CPAs

JCI undertook the following process to validate the accuracy and completeness of the project description in the PoA-DD /4/ and CPA-DD /5/;

Process : Document review, Follow-up action (On-site visit, interviews), etc.
Document review: Findings (CARs, CLs), FSR, EIA report, Technical specifications, Design data/drawings, Relevant laws/regulations/codes, Internet websites
Follow-up action : Observation/inspection of the physical site and/or equipment during on-site visit and Interviews with stakeholders

As a result of the above process, JCI concluded that the descriptions of the DDs were accurate and its contexts were complete, and well outlined the nature and technical aspects of the project activity.

The major features of the PoA project activity described in the PoA-DD are summarized below:

- Coordinating/Managing Entity (CME): Standard Bank Plc (as sole project participant of the PoA)

- Purpose: Support of the development and implementation of small-scale renewable energy projects in South Africa in order to displace grid-connected, fossil fuel based electricity generation through the promotion of grid-connected renewable energy based electricity generation, thereby reducing greenhouse gas (GHG) emissions.
- Physical/ geographical boundary: South Africa (as defined by the national boundary)
- Applicable methodology: AMS-I.D "Grid connected renewable electricity generation" (version 17)
- CPAs under the PoA: Small-scale renewable energy project including hydro, wind, solar photovoltaic (PV) and geothermal.
- Length of PoA: 28 years

The major features of the project activity described in the DDs for the first specific CPA (CPA-1) are summarized below:

- Project name: Greefspan 11.029 MW Solar PV Project
- Sectoral scope: 01 (Energy industries (renewable / non-renewable sources))
- Project type: Grid connected renewable electricity power generation
- Small-scale project: 11.029 MW (maximum output) of solar photovoltaic (PV) power plant
- Expected power generation: 26,161 MWh annually
- Project location: Pixley ka Seme district municipality, Northern Cape province in South Africa
- Estimated emission reductions: Average of 24,758 t-CO_2e/year during the first crediting period
- Crediting period: 7 years (First crediting period), which can be extended 2 times for max. 21 years.

JCI has confirmed that the accuracy and completeness of the project description in the PoA-DD and the specific CPA-DD (for CPA-1) submitted by the CME, and also confirmed that the framework developed for the implementation of the PoA and defining a CPA under the PoA was appropriate.

6. Additionality of a project activity

6.1 Demonstration of additionality of the PoA as a whole

The "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" (version 01.0) /68/ stipulates the following criteria for demonstration of additionality for PoA project relating to the proposed project.

1) Additionality shall be demonstrated by establishing that in the absence of CDM, none of the implemented CPAs would occur.
2) PoAs that consist of one or more microscale projects as CPAs shall include eligibility criteria derived from all the relevant requirements of the "Guidelines for demonstrating additionality of microscale project activities" (version 04) /71/.
3) PoAs that consist of one or more small-scale projects as CPAs shall include eligibility criteria derived from all the relevant requirements of Guidelines on the demonstration of additionality of small-scale project activities" (Version 09.0) /64/.
4) The CME shall demonstrate that compliance with the additionality-related eligibility criteria set in the PoA design document will ensure that all the relevant additionality-related guidelines, tools or any requirements embedded in the methodologies are met.

The PoA-DD /4/ stipulates appropriately it will be demonstrated for each CPA under the PoA that the CPA is additional following above criteria 2) and 3).

As the PoA consists of small scale and micro scale projects as CPAs, additionality of the PoA will be so demonstrated that each CPA is additional through the eligibility criteria in the PoA-DD /4/ according to either the Guidelines on the demonstration of additionality of small-scale project activities (Version 09.0) /64/ or "Guidelines for demonstrating additionality of microscale project activities (version 04) /71/.

As each CPA will comply with the eligibility criteria on additionality, it can be concluded that in the absence of this PoA and CDM, none of the proposed CPAs would occur.

JCI assessed and concluded that the additionality of the PoA as a whole is stiplulated in the PoA-DD /4/ appropriately in accordance with the "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" /68/.

6.2 Start date of a PoA/CPA

The PoA-DD /4/, in accordance with the "Glossary of CDM terms" (version 06) /61/, stipulates in Section D.1 that the start date of the PoA is 27/02/2012, which is the day when the validation contract between the CME and the DOE came into force. The CPA-DD /5/ apropriately stipulates in Section A.8.1, in accordance with the Glossary of CDM terms /61/, that the start date of the CPA-1 is 01/01/2013 on which the contract will be signed for the construction services required for the project activity.

JCI confirmed that the PoA-DD /4/ and CPA-DD /5/ appropriately stipulates the start date of the PoA and CPA, and also that the PoA-DD /4/ determines the start date of any CPA is not prior to the commencement of the validation of the PoA, which is the date the CDM-PoA-DD /1/ was first published for global stakeholder consultation on 13/03/2012.

JCI validated and concluded that the start date of the PoA and CPA stipulated in the DDs are appropriate in accordance with the "G lossary of terms" (version 06) /61/.

6.3 Identification of alternatives

According to the simplified baseline and monitoring methodology AMS-I.D "Grid connected renewable electricity generation" (version 17) /63/, the baseline scenario is prescribed as "The electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid".
JCI validated and concluded that the credible and feasible baseline scenario to be applied to the project activity is prescribed in the approved methodology AMS-I.D (version 17) /63/ and no further analysis is required.

6.4 Investment analysis

Demonstration of additionality of the PoA is stipulated as described in Section 6.1 above. The eligibility criteria for the demonstration of additionality for each CPA type were derived from the Guidelines on the demonstration of additionality of small-scale project activities (Version 09.0) /64/ or "Guidelines for demonstrating additionality of microscale project activities (version 04)" /71/. In case the CPA is not a microscale project activity, additionality can be demonstrated according to the Guidelines /64/, which includes the investment barrier analysis.

JCI validated and concluded that the PoA-DD /4/ stipulates appropriately the investment analysis to be applied to the CPA in accordance with the "Tool for the demonstration and assessment of additionality" (version 06.1.0) /79/ and "Guidelines on the assessment of investment analysis" (version 05.0) /76/.

JCI also validated and concluded that the investment analysis is not used to demonstrate the additionality of the first CPA (CPA-1) and that Option C "Automatic additionality" stipulated in the PoA-DD /4/ is applied appropriately since the CPA-1 project activity is solar PV technology as per the Guidelines /64/, the positive list of grid-connected renewable electricity generation technologies.

6.5 Barrier analysis

The PoA-DD /4/ describes additionality-related eligibility criteria as provided in the "Standard for demonstration of additionality, development of eligibility criteria and application of multiple technologies for programme of activities" /68/. In case the CPA is not a microscale project activity, additionality can be demonstrated based on at least one of the following barriers in accordance with the Guidelines on the demonstration of additionality of small-scale project activities (Version 09.0) /64/:
(a) Investment barrier
(b) Access-to-capital barrier

(c) Other barriers

JCI assessed and confirmed that the PoA-DD /4/ stipulates appropriately two specific options for barrier analysis to be applied to CPAs.
JCI also validated and concluded that the barrier analysis is not used to demonstrate the additionality of the first CPA (CPA-1) and that Option C Automatic additionality stipulated in the PoA-DD /4/ is applied appropriately since the CPA-1 project activity is solar PV technology as per the Guidelines /64/, the positive list of grid-connected renewable electricity generation technologies.

6.6 Common practice analysis

JCI confirmed that the common practice analysis was skipped complying with CDM-VVS /62/ since the proposed PoA consists of one or more small-scale projects as CPAs.

7. Eligibility criteria for inclusion of a CPA in the PoA

JCI assessed the eligibility criteria for inclusion of a CPA in the PoA in accordance with the "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" (version 01.0) /68/.

The CME defined thirteen (13) eligibility criteria, including all the twelve (12) criteria (a) to (l) stipulated in the Standard /68/, for inclusion of a CPA under the PoA as described in the PoA-DD /4/.

JCI checked and determined whether the following thirteen (13) eligibility criteria as shown in the table below are sufficiently objective and comprehensive to permit the assessment of the inclusion of CPAs in the PoA.

Table IV-1 Check for Eligibility criteria for inclusion of a CPA in the PoA

Eligibility criteria for inclusion	PoA-DD	Check result
(a) The geographical boundary of the CPA including any time-induced boundary consistent with the geographical boundary set in the PoA;	CPA to provide detailed documentation regarding the exact geographical location of the project activity such as EIA report or feasibility study/project description.	OK. Confirmed appropriateness of the criteria and check process in the PoA-DD. Confirmed CPA-1 applies FSR, EIA report and GPS coordinates.
(b) Conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (e.g. programme logo);	Agreement between CME and CPA where the CPA legally confirms its unique adhesion to this PoA as CDM component project activity; and cross check evidence on the no existence of similar CDM project activities/component project activity, as described in the management system, Section C. Each CPA will have a unique name, which will at least refer to the location of the CPA and the installed capacity of the project.	OK. Confirmed appropriateness of the criteria and check process in the PoA-DD. Confirmed CPA-1 meets the criteria by CPA-DD, FSR, EIA report, on-site observation and website source.

(c) The specifications of technology/ measure including the level and type of service, performance specifications including compliance with testing/certifications;	FSR or other technical description, EIA report or PPA that the CPA involves the implementation of a technology eligible for inclusion in the PoA.	OK. Confirmed appropriateness of the criteria and check process in the PoA-DD. Confirmed CPA-1 meets the criteria by FSR, Project description, technical drawings and on-site observation.
(d) Conditions to check the start date of the CPA through documentary evidence;	(Draft) contract with party providing equipment/construction/ operation services or a contractual agreement between CME and CPA implementer.	OK. Confirmed appropriateness of the criteria in the PoA-DD. Confirmed CPA-1 meets the criteria by FSR, Project description and on-site observation. (Contract not signed yet)
(e) Conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by CPAs;	Detailed assessment that the project meets all the applicability criteria of version 17 of AMS-I.D. Explanation is provided in Section D.2 of the specific CPA-DD.	OK. Confirmed appropriateness of the criteria in the PoA-DD. Confirmed CPA-1 meets the applicability criteria by FSR, Project description and on-site observation as per the requirements of AMS-I.D. and CPA-DD.
(e) Ditto	FSR or other relevant project documentation proving that the CPA does not use generating equipment, which is transferred from another activity.	OK. Confirmed appropriateness of the criteria in the PoA-DD. Confirmed CPA-1 meets the criteria by FSR, Project description, technical drawings and on-site observation.
(f) The conditions that ensure that CPAs meet the requirements pertaining to the demonstration of additionality as specified in Section A above;	Additionality check in each CPA-DD carried out in line with additionality-related eligibility criteria.	OK. Confirmed appropriateness of the criteria in the PoA-DD. Confirmed CPA-1 meets the criteria by FSR, Project description and on-site observation based on additionality-related eligibility criteria in the CPA-DD.

(g) The PoA-specific requirements stipulated by the CME including any conditions related to undertaking local stakeholder consultations and environmental impact analysis;	(a) The report of the meeting that includes summary of concerns raised and clarification provided and other information such as attendance sheet, invitations and photographs shows that a local stakeholder consultation was carried out. (b) EIA report or EIA license.	OK. Confirmed appropriateness of the criteria in the PoA-DD. Confirmed CPA-1 meets the criteria by EIA report, documentary evidence and on-site observation
(h) Conditions to provide an affirmation that funding from Annex I parties, if any, does not result in a diversion of official development assistance;	Confirmation letter from CPA entity that the CPA has not received funding from Annex I parties or confirmation letter from Annex I party that funding to the CPA does not result in a diversion of official development assistance.	OK. Confirmed appropriateness of the criteria in the PoA-DD. Confirmed CPA-1 meets the criteria by FSR, Project description, documentary evidence of ODA and on-site observation.
(i) Where applicable, target group (e.g. domestic/ commercial/industrial, rural/urban, grid-connected/ off-grid) and distribution mechanisms (e.g. direct installation);	Power Purchase Agreement, wheeling contract or any other project documentation proving that the CPA supplies electricity to a national or regional grid; or supplies electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling.	OK. Confirmed appropriateness of the criteria in the PoA-DD. Confirmed CPA-1 is appropriate by FSR, Project description, technical drawings and on-site observation.
(j) Where applicable, the conditions related to sampling requirements for a PoA in accordance with the approved guidelines/standard from the Board pertaining to sampling and surveys;	Monitoring Section B.7 of the PoA-DD and D.7 of the specific CPA-DD. [Applicable for geothermal project types]	OK. Confirmed appropriateness of the monitoring plan in the PoA-DD. Confirmed CPA-1 meets the criteria and applies no sampling in the CPA-DD.
(k) Where applicable, the conditions that ensure that every CPA in aggregate meets the small-scale or microscale threshold criteria and remains within those thresholds throughout the crediting period of the CPA;	Feasibility, engineering design or other relevant study reports.	OK. Confirmed appropriateness of the criteria in the PoA-DD. Confirmed CPA-1 is appropriate by FSR, Project description, technical drawings and on-site observation.

(l) Where applicable, the requirements for the debundling check, in case CPAs belong to small-scale (SSC) or microscale project categories.	Debundling check carried out in line with the Guidelines on assessment of debundling for SSC project activities (version 03, EB 54, Annex 13).	OK. Confirmed appropriateness of the criteria and check process in the PoA-DD. Confirmed CPA-1 meets the criteria by FSR, Project description and on-site observation as per the Guidelines.

The CME also defined seven (7) elements of the management system to ensure eligibility criteria for inclusion of a CPA under the PoA as described in Section C in the PoA-DD /4/.
JCI assessed that the following seven (7) elements of the management system, as shown in the table below, of the criteria for inclusion of a CPA in the PoA.

Table IV-2 Check for Management system to ensure the Eligibility criteria for inclusion of a CPA

Management system of CME to ensure the eligibility criteria for inclusion	PoA-DD	Check result
(a) A clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies;	The CME will establish CPA Inclusion Management System (CPA-IMS) to define roles and responsibilities of personnel involved in the process of inclusion of CPAs as shown in the PoA-DD.	OK, confirmed appropriateness in the PoA-DD
(b) Records of arrangements for training and capacity development for personnel;	All CPA-IMS staff will undertake an annual review of their competencies and put in place an appropriate training and development plan. Records of arrangements for training and capacity development will be maintained.	OK, confirmed appropriateness in the PoA-DD
(c) Procedures for technical review of inclusion of CPAs;	As the responsibilities of the CPA-IMS operator, a technical review of a proposed CPA will be carried out. If a CPA complies with all the technical requirements and provides the necessary documentary evidences required by the eligibility criteria as estimated by the IMS operator, its inclusion will be approved.	OK, confirmed appropriateness in the PoA-DD
(d) A procedure to avoid double counting (e.g. to avoid the case of including a new CPA that has already been registered either as a CDM project activity or as a CPA of another PoA);	The procedure will be established to avoid double counting and avoid the case of including a new CPA that has been already registered either as a CDM project activity or as a CPA of another PoA.	OK, confirmed appropriateness in the PoA-DD

(e) Records and documentation control process for each CPA under the PoA;	The CME will develop and maintain an electronic database, which will contain essential data and information about each CPA. The CPA-IMS Lead operator appointed by the CME will be responsible for entering, updating and maintaining data and information regarding CPAs into the electronic database and will have read and write access. This database and other records applicable will be stored in a market leading cloud based management system that will provide the necessary infrastructure for managing document security, access and version control.	OK, confirmed appropriateness in the PoA-DD
(f) Measures for continuous improvements of the PoA management system;	As per standards for quality management systems (e.g. ISO 9001) the CPA-IMS operator will plan and implement the monitoring and improvement processes. Management System Improvement Plan will be developed every 6 months, which will detail the actions to improve the management system based on analysis of the measurement and monitoring activities.	OK, confirmed appropriateness in the PoA-DD
(g) PoA subscription	Each CPA will enter into PoA Participation Agreement with the CME. The PoA Participation Agreement will confirm that the entity implementing the CPA is aware and agrees that the CPA is being subscribed to the PoA.	OK, confirmed appropriateness in the PoA-DD

JCI assessed and concluded, from the above check, the eligibility criteria and its management system for inclusion of a CPA in the PoA is appropriately defined in the PoA DD /4/ complying with the "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" (version 01.0) /68/.

8. Application of the selected baseline and monitoring methodology

8.1 Application of multiple methodologies

JCI assessed the application of multiple methodologies for the proposed PoA and CPA projects in accordance with the "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" /68/.

The PoA DD /4/ stipulates that the proposed PoA will include grid-connected renewable power generation units of the following technologies types: wind, hydro (run-of-river reservoir and accumulation reservoir), geothermal and solar PV. The project activities will consist of the installation of new power plants at sites

where no renewable energy power plant was operated prior to the implementation of the project activity (Greenfield plants). Installed capacities of individual SSC-CPAs will be below or equal to 15 MW. All SSC-CPAs implemented under the proposed PoA will apply the approved small-scale baseline and monitoring methodology AMS-I.D. "Grid connected renewable electricity generation" (version 17) /63/. Thus, multiple methodologies are not applied to the proposed PoA.
JCI confirmed and concluded that the PoA-DD and the generic CPA-DD stipulates appropriately the applied technologies/measures and the approved methodology AMS-I.D. /63/, that will be implemented in the proposed PoA, with no application of multiple methodologies.

8.2 Applicability of the selected baseline and monitoring methodology to the project activity

According to the PoA-DD /4/, it is described that the CPA under the PoA will apply the small scale methodology AMS-I.D. "Grid connected renewable electricity generation" (version 17) /63/.

JCI assessed and concluded, from the following steps, that the approved methodology AMS-I.D. /63/ is appropriately applied to the project activity (CPA-1);

Steps : Document review, Follow-up action (On-site visit, interviews), etc.
Document review: Findings (CARs, CLs), FSR, EIA report, Technical specifications, Design data/drawings, Relevant laws/regulations/codes, Internet websites.
Follow-up action : Observation/inspection of the physical site and/or equipment during on-site visit and Interviews with stakeholders

1) Document review
JCI reviewed the FSR /6/, /8/ and EIA report /9/ of the project and confirmed grid-connected renewable energy will be utilized for the power generation.

2) On-site visit on 09 to 11 May 2012
JCI confirmed that the first CPA implemented under the proposed PoA will be grid-connected solar power plant and newly constructed at the site with a capacity of 11.029 MW of solar PV.

3) Findings of CL
JCI issued the finding of CL-2 to clarify the methodology applicability condition of the proposed project, and then closed as being resolved.

JCI checked whether the project activities (CPA-1) meet the following seven (7) conditions of applicability of the approved methodology AMS-I.D. /63/ as shown in the table below:

Table IV-3 Applicability check for the CPA-1 for the technology/measure in AMS-I.D

No.	Technology/measure	Project activities	Check Result
1	This methodology comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass: (a) Supplying electricity to a national or a regional grid; or (b) Supplying electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling.	The generic SSC-CPA under the PoA will use grid-connected renewable generation units, including hydro, geothermal, solar PV or wind power generation that will supply electricity to a national or a regional grid, or to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling. **No. 1 is applicable for the project**	OK, confirmation by on-site observation /44/ and document review of FSR /6/, Project description /8/ and technical drawings /51/, /52/

No.	Technology/measure	Project activities	Check Result
2	This methodology is applicable to project activities that: (a) Install a new power plant at a site where there was no renewable energy power plant operating prior to the implementation of the project activity (Greenfield plant); (b) Involve a capacity addition; (c) Involve a retrofit of (an) existing plant(s); or (d) Involve a replacement of (an) existing plant(s).	The generic SSC-CPA will include activities that: (a) Install a new power plant at a site where there was no renewable energy power plant operating prior to the implementation of the project activity (greenfield plant). **No. 2 is applicable for the project**	OK, confirmation by on-site observation /44/ and document review of FSR /6/, Project description /8/ and technical drawings /51/, /52/
3	Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology: • The project activity is implemented in an existing reservoir with no change in the volume of reservoir; • The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the Project Emissions section, is greater than 4 W/m2; • The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the Project Emissions section, is greater than 4 W/m2.	For SSC-CPAs that implement hydropower plants with a reservoir, at least one of the following conditions will be satisfied: • The SSC-CPA is implemented in an existing reservoir with no change in the volume of reservoir; • The SSC-CPA is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the SCC-CPA, as per definitions given in the Project Emissions section, is greater than 4 W/m2; • The SSC-CPA results in new reservoirs and the power density of the power plant, as per definitions given in the Project Emissions section, is greater than 4 W/m2. In the case of SSC-CPA with power projects that are not hydro powered, this condition is not applicable. **No. 3 is applicable for the project**	OK, confirmation by on-site observation /44/ and document review of FSR /6/, Project description /8/ and technical drawings /51/, /52/
4	If the new unit has both renewable and non-renewable components (e.g. a wind/diesel unit), the eligibility limit of 15 MW for a small-scale CDM project activity applies only to the renewable component. If the new unit co-fires fossil fuel, the capacity of the entire unit shall not exceed the limit of 15 MW.	The renewable energy component of generic SSC-CPA with both renewable and non-renewable components will be smaller or equal to 15 MW. In case of SSC-CPAs that co-fire fossil fuel, the capacity of the entire unit will not be bigger than 15 MW. If the generic SSC-CPA does not use both renewable and non-renewable components, this condition in not applicable. **No. 4 is not applicable for the project**	OK, confirmation by on-site observation /44/ and document review of FSR /6/, Project description /8/ and technical drawings /51/, /52/
5	Combined heat and power (co-generation) systems are not eligible under this category.	The PoA does not include combined heat and power (co-generation) systems. **No. 5 is not applicable for the project**	OK, confirmation by on-site observation /44/ and document review of FSR /6/, Project description /8/ and technical drawings /51/, /52/

No.	Technology/measure	Project activities	Check Result
6	In the case of project activities that involve the addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct from the existing units.	The Programme of Activities does not include capacity additions. **No. 6 is not applicable for the project**	OK, confirmation by on-site observation /44/ and document review of FSR /6/, Project description /8/ and technical drawings /51/, /52/
7	In the case of retrofit or replacement, to qualify as a small-scale project, the total output of the retrofitted or replacement unit shall not exceed the limit of 15 MW.	The PoA does not include retrofits or replacements. **No. 7 is not applicable for the project**	OK, confirmation by on-site observation /44/ and document review of FSR /6/, Project description /8/ and technical drawings /51/, /52/

JCI has checked and validated the applicability of the approved methodology AMS-I.D. /63/ through the on-site visit (09 to 11 May 2012), the desk review of project related documents in particular /4/ and the subsequent follow-up interviews. JCI, thus, confirm and concluded that the project activity appropriately meets the applicability criteria of the selected baseline and monitoring methodology AMS-I.D. /63/ in accordance with the CDM requirements with sufficient evidences.

8.3 Boundary

JCI has identified the project boundary from the following steps;

Steps: Document review, Follow-up action (On-site visit, interviews), etc.
Document review: Findings (CARs, CLs), Plant layout, FSR, EIA report, Technical specifications, Design data/drawings, Relevant laws/regulations/codes, Internet websites.
Follow-up action: Observation/ inspection of the physical site and/or equipment during On-site visit and Interviews with stakeholders

The PoA-DD /4/ stipulated as one of the eligibility criteria that the geographical boundary of the CPA including any time-induced boundary is located within the geographical boundary set in the PoA, that is, the national boundaries of the Host Country, South Africa as identified in Section A.5. The first specific CPA (CPA-1)project is located in Pixley ka Seme district municipality, Northern Cape province in South Africa, the geo-coordinates of which is as clearly identified in the CPA-DD /5/.

JCI validated that the geographical boundary in the PoA-DD is identified appropriately and that of the first specific CPA (CPA-1) meets the geographical boundary in the PoA-DD as one of the eligibility criteria of the PoA.

JCI checked that the system boundary and associated emissions for the PoA and the generic CPA are appropriately identified in Section B.3 in the PoA-DD /4/. JCI also checked the project activity and associated emissions for the specific first CPA (CPA-1) are appropriately identified in Section D.3 in the CPA-DD /5/ complying with the PoA-DD /4/. The check conclusion for system boundary and emissions for the first CPA (CPA-1) is summarized in the table below.

Table IV-4 Check for System Boundary and Emissions

Emissions	GHGs involved	Requirement of Methodology	POA, CPA-DDs	Description	Check conclusion
Baseline emissions	CO_2	Yes	Yes	Emissions from electricity generation in fossil fuel fired power plants. Main emission source	OK
	CH_4	No	No	Minor emission source	OK
	N_2O	No	No	Minor emission source	OK
Project emissions	CO_2	No	No	Not included because of Solar PV energy (no fossil fuel consumption) (PE_y=0)	OK
	CH_4	No	No	Not included because of Solar PV energy (no fossil fuel consumption) (PE_y=0)	OK
	N_2O	No	No	Not included because of Solar PV energy (no fossil fuel consumption) (PE_y=0)	OK

GHG emissions more than 1% of the overall (VVS Para.87)

JCI validated all potential sources of GHG emissions within the boundary of proposed project and concluded that all sources, which are expected to contribute more than 1% of the overall expected average annual emissions reductions are included in the estimation of the PoA-DD and CPA-DD.

8.4 Description of baseline scenario

JCI has confirmed that the baseline identification of the project was conducted in appropriate manner by confirming of following steps and sources;

Steps : Document review, Follow-up action (On-site visit, interviews), etc.
Document review: Findings (CARs, CLs), Plant layout, FSR, EIA report, Technical specifications, Design data/drawings, Relevant laws/regulations/codes, Grid baseline emission factors, Internet websites.

In accordance with the simplified baseline and monitoring methodology AMS-I.D. “Grid connected renewable electricity generation” (version 17) /63/, the project participant has identified the baseline scenario is “the electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid”.

Therefore, JCI validated and concluded that the PoA-DD /4/ and the CPA-DD /5/ appropriately identified “Continuation of the current situation, i.e. “the electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid” as the credible and feasible baseline scenario to the project activity, complying with the selected methodology AMS-I.D. /63/.

Complying with CDM-VVS version 02 Paragraph 94 /62/, JCI hereby confirmed that:

(a) All the assumptions and data used by the project participants are listed in the PoA-DD /4/ and the CPA-DD /5/, including their references and sources;

(b) All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the PoA-DD /4/ and the CPA-DD /5/;

(c) Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable;

(d) Relevant national and/or sectoral policies and circumstances are considered and listed in the PoA-DD /4/ and the CPA-DD /5/,

(e) The approved baseline methodology has been correctly applied to identify the most reasonable baseline scenario and the identified baseline scenario reasonably represents what would occur in the absence of the proposed CDM project activity.

8.5 Estimation of emission reductions of PoA/CPA

JCI validated for the algorisms and/or formulae applied for the proposed project activity through taking into consideration on the following steps in accordance with the paragraphs 98, 99and 100 of CDM-VVS version 02 /62/.

1) Step-1 Validation work:

   JCI verified the data and parameters used in the equations, including references to any other data sources used, in the PoA-DD /4/ and the CPA-DD /5/.

2) Step-2 Results of Validation work:

   JCI provided the opinion by taking following steps to assess whether the algorithms and/or formulae used to determine emission reductions for the proposed project activity is appropriate or not.

   (a) All assumptions and data used by the project participants are listed in the POA-DD /4/ and the CPA-DD /5/ including their references and sources are appropriate.

   (b) All documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PoA-DD /4/ and the CPA-DD /5/.

   (c) All values used in the PoA-DD /4/ and the CPA-DD /5/ are considered reasonable in the context of the proposed CDM project activity.

   (d) The baseline methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions.

   (e) All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PoA-DD /4/ and the CPA-DD /5/.

JCI confirmed that the emission reduction calculation through the excel spread sheet for ER calculation of the first CPA (CPA-1: Greefspan 11.029 MW solar PV project) /40/ and concluded that the ER calculation was correctly conducted.

1) Data and parameters that are to be reported ex-ante
   JCI verified that the data and parameters used for ex-ante calculation are correctly defined and listed in Section B.6.2 in the PoA-DD /4/ and applied for the specific first CPA (CPA-1) as described in Section D.6.2 in the CPA-DD /5/.
2) Ex-ante calculations of emission reductions
   JCI verified that ex-ante calculations are correctly defined in Section B.6.3 in the PoA-DD /4/ and conducted for the specific first CPA as described in Section D.6.3 of the CPA-DD /5/.
   JCI also assessed and confirmed the ER calculation for CPA-1 was correctly conducted as per the excel spread sheet /40/.

The CPA-1 is a grid-connected renewable electricity generation from solar photovoltaic and the ER calculation for CPA-1 is conducted as described in Section D.6.3 in the CPA-DD /5 according to the

selected methodology AMS-I.D. /63/ and the procedures prescribed in the referenced "Tool to calculate the emission factor for an electricity system" (version 02.2.1) /77/.

1) Baseline Emissions (BEy)
The baseline emissions are to be calculated as follows:
$BE_y = EG_{BL,y} * EF_{CO2,grid,y}$

Where:
$EG_{BL,y}$ is calculated as 26,161 MWh as derived from FSR /6/.

$EF_{CO2,grid,y}$, is calculated based on the results of the grid emission factor computation described in Appendix 4 of the PoA-DD based on guidelines of the Tool to calculate the emission factor for an electricity system version 02.02.1. The calculation of the combined margin emission factor is based on weighted average CM whereby equation (13) in the tool shown below was applied:
$EF_{grid,CM,y} = EF_{grid,OM,y} * w_{OM} + EF_{grid,BM,y} * w_{BM}$
Since the project involves the installation of a solar power plant, the values of w_{OM} and w_{BM} are 0.75 and 0.25 respectively.
Here: $EF_{grid,BM,y}$ = 0.91 tCO2/MWh, $EF_{grid,OM,y}$ = 0.9585 tCO2/MWh,
$EF_{grid,CM,y}$ = 0.9464 tCO2/MWh.
Therefore:
$EF_{CO2,grid,y}$ = 0.9464 tCO2/MWh
BE_y =26,161 * 0.9464 = 24,758 tCO2/year

2) Project Emissions (PEy)
There are no project emissions to be accounted for, therefore:
PEy = 0

3) Leakage Emissions
The project activity does not use energy generating equipment that is transferred from another activity. Therefore, leakage emissions are not considered.

4) Emission Reductions (ERy)
The emission reductions are to be calculated as follows:
$ER_y = BE_y - PE_y – Le_y$

Therefore, emission reductions equal:
ER_y = 24,758 – 0 – 0 = 24,758 tCO2/y

JCI validated and concluded that the estimation of emission reductions is correctly conducted in accordance with the selected methodology AMS-I.D. /63/ and the referenced "Tool to calculate the emission factor for an electricity system" (version 02.2.1) /77/.

8.6 Monitoring plan

JCI has assessed the monitoring plan through the following steps and sources:
Steps : Document review, Follow-up action (On-site visit, interviews), etc.
Document review: Findings (CARs, CLs), Plant layout, FSR, EIA report, Technical specifications, Design data/drawings, Relevant laws/regulations/codes, Internet websites.

1) Data and parameters to be monitored

The PoA-DD /4/ Section B.7.1 determined general parameter of $EG_{BL,y}$, the quantity of net electricity supplied by the project to the grid in year y, to be monitored by each CPA and also specific parameters based on type of power projects according to the selected methodology AMS-I.D. /63/.

As per the PoA-DD /4/, the CPA-DD /5/ of CPA-1 appropriately determined $EG_{BL,y}$, the quantity of net electricity supplied by the project to the grid in year y, to be monitored by the project activity.

JCI assessed and concluded that the data and parameters to be monitored are appropriate complying with the selected methodology AMS-I.D. /63/ and the referenced "Tool to calculate the emission factor for an electricity system" (version 02.2.1) /77/.

2) Monitoring plan

As determined in the PoA-DD /4/, the CME will be responsible for the preparation of the Monitoring Reports and communication with the DOE during verification activities. The Monitoring Report will compile all required monitoring information in order to allow the DOE to verify the emission reductions for each monitoring period of each individual CPA. The Monitoring Report will unambiguously set out the data on emission reductions generation by each CPA during the monitoring period consistent with the requirements of the PoA-DD /4/ and the corresponding CPA-DD /5/. Record keeping procedures undertaken by the CME will ensure that the data attributed to a monitoring period can be clearly attributed to an individual CPA and will further prevent double counting of emission reduction data.

3) Monitoring manual

The CME will ensure that all persons that participate in the monitoring process will be suitably qualified and trained in the operation and maintenance of the CPA project activity. These persons will also receive training on the application of the monitoring plan. The manual is not available yet since the CPA-1 project is still under the early stage of preparing for construction. The team members of the monitoring team will be trained before operation of the monitoring. The monitoring manual will be available by the first verification and FAR-1 is issued in this regard.

4) JCI's opinion on monitoring plan

JCI has validated and concluded that the monitoring plan in the PoA-DD /4/ and CPA-DD /5/ is appropriate complying with the selected methodology AMS-I.D. /63/ and the referenced "Tool to calculate the emission factor for an electricity system" (version 02.2.1) /77/, and that the monitoring arrangement of the project participant is feasible within the project design and also the project participant is able to implement the monitoring plan including management organization and operational ability.

9. Environmental impacts

The PoA-DD /4/ determines that the Environmental Impact Assessment (EIA) for the project activity is to be conducted at the CPA level, and the EIA for the first CPA (CPA-1) was conducted by Van Zyl Environmental Consultants according to the EIA Regulations 2006 /86/ to ensure that the project complies with relevant national, regional and local regulations. The EIA report /9/ of the CPA-1 was issued in May 2011 and approved by Department of Environmental Affairs on 28/09/2011 /12/.

The EIA report /9/ referred to anticipated environmental impacts by the project activity both during the construction period and after the operation start, and suggested mitigation measures against anticipated air pollution, water pollution, noise, solid waste and ecological environment. No significant ecological impact on the local area was anticipated.
Through the interviews with local governments during the on-site visit /44/, JCI has confirmed that appropriate mitigation measures had been taken as described in the CPA-DD /2/ and no serious issues were found.

JCI validated and concluded that the project participant took necessary mitigation measures and anticipated environmental impacts by the project activity are controlled at a minimum level.

10. Local stakeholder consultation

The PoA-DD /4/ determines that the Local stakeholder consultation for the project activity is to be held at the CPA level, and stakeholder consultation for the first CPA (CPA-1) was held in February 2012.

An extensive public participation process has been followed with regard to this project.

The process included the following:

1. Identification of interested and affected parties
2. Placement of advertisements in local newspaper/42/ on 25/01/2012
3. Provision of written material and electronic material to identified interested and affected parties
4. Invitation to meeting for interested parties
5. Stakeholder consultation meeting held on 03/02/2012
6. Summarizing of comments received
7. Provision of report on consideration of comments received

Comments and concerns relating to the proposed development were considered minimal, and there was no need to implement special measures.

Based on the above, JCI concluded that the CPA-1 project activity is supported by local stakeholders, gives no significant adverse impacts on local environment, and instead is expected to contribute to the development of local economy and the improvement of living conditions of local residents.

APPENDIX A: CDM VALIDATION PROTOCOL (POA)

South Africa Renewable Energy Programme (SA-REP)

1. INTRODUCTION

The validation protocol is prepared for the following purposes:

- To ensure that, in accordance with VVS version 02.0 (Annex 4, CDM-EB65, "VVS"), CDM requirements and other relevant guidelines for PoA projects issued by EB, these rules are complied with for any project activities requesting registration as a proposed PoA project activity.
- To ensure a thorough, independent assessment of proposed project activities submitted for registration as a proposed PoA project activity against the applicable PoA requirements.
- To assess whether the project design of the proposed PoA project activity meets the PoA requirements, using objective evidence, and to assess the completeness and accuracy of the claims and conservativeness of the assumptions made in the project design document.

The validation protocol is consisted of the following two types of tables, which are effective for the purposes of validation above.

TABLE-1 contains the checklist with questions along with the thematic chapter of VVS and other relevant guidelines for PoA project issued by EB...

TABLE-2 shows the corrective actions or clarifications which are requested to be taken in **TABLE-1** and the response from the PP.

<Index>

TABLE-1 Requirements Checklist

TABLE-2 Resolution of Corrective Actions and Clarification Requests

2. CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS AND FORWARD ACTION REQUESTS

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

- **CAR** : a corrective action request (**CAR**) is raised, if one of the following occurs:
  - (a) The PPs have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;
  - (b) The PoA requirements have not been met;
  - (c) There is a risk that emission reductions cannot be monitored or calculated.
- **CL** : a clarification request (**CL**) is raised,

  if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.
- **FAR** : a forward action request (**FAR**) is raised,

  during validation to highlight issues related to project implementation that requires review during the first verification of the project activity.

  FARs shall not relate to the PoA requirements for registration.

The CARs and CLs are resolved or "closed out" only if the project participants modify the project design, rectify the design documents (DDs, PoA-DD, CPA-DD) or provide adequate additional explanations or evidences that satisfy the requirements. If this is not done, the project activity will not be recommended for registration to the CDM EB.

All CARs, CLs and FARs will be reported on in its validation report. This reporting shall be 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 or supporting annexes.

Revision History of the Document

Revision No.	Date	Nature of revision(s)
00	29/06/2012	Initial Issuance (based on the PoA-DD and CPA-DD version 03 dated 15/06/2012)
	19/07/2012	1st response by PP
01	30/08/2012	2nd issuance by DOE.
	31/08/2012	2nd response by PP

Appendix A Protocol for CDM (PoA) Project

TABLE-1 REQUIREMENTS CHECKLIST(POA) **(OK/No/NA/Tbv)**

PoA-DD Section	Check Points (according to EB 67 Annex 30 " Guidelines for Completing The Programme Design Document Form for Small-Scale CDM Programmes of Activities" (Version 02.0)	Reference GL,DD	Check Comment	CAR, CL, No.
	General guidelines(PoA)		--	--
	Title of the project activity:		--	--
1.	When designing a PoA and completing the F-CDM-SSC-PoA-DD, and in addition to applying the Project standard, the PoA standard and the selected approved baseline and monitoring methodology(ies) (hereinafter referred to as the selected methodology(ies)), CMEs should also consult the "Rules and References" section on the UNFCCC CDM website <http://cdm.unfccc.int/>	PoA GL	OK	
2.	Information used to:(a) demonstrate additionality; (b) describe the application of selected baseline and monitoring methodology(ies); and (c) support the environmental impact assessment, is not considered proprietary or confidential. Any data, values and formulae included in electronic spreadsheets provided must be accessible and verifiable.	PoA GL	OK	
3.	The F-CDM-SSC-PoA-DD must be completed in English, and all attached documents must be in English or contain a full translation of relevant sections into English	PoA GL	OK	
4.	The F-CDM-SSC-PoA-DD must be completed using the same format without modifying its font, headings or logo, and without any other alteration to the form.	PoA GL	OK	
5.	Tables and their columns in the F-CDM-SSC-PoA-DD may not be modified or deleted, but rows may be added, as needed. Additional appendices may be added.	PoA GL	OK	
6.	If a section of the F-CDM-SSC-PoA-DD is not applicable, it must be explicitly stated that the section is left blank intentionally	PoA GL	OK	
7.	The format used for presentation of values in the F-CDM-SSC-PoA-DD should be in an internationally recognized format, for example digits grouping should be done in thousands and a decimal point should be marked with a dot (.), not with a comma (,).	PoA GL	OK	
	Specific guidelines(PoA)		--	--
PART I.	**Programme of activities (PoA)**		--	--
SECTION A.	**General description of PoA**			
A.1	**Title of the PoA:**			
	Indicate: (a) The title of the proposed PoA; (b) The current version number of the PoA-DD; (c) The date the PoA-DD was completed (DD/MM/YYYY).	PoA DD	OK	

CAR: Corrective Action Request, **CL**: Clarification Request, **FAR**: Forward Action Request,
NA: Not Applicable, Tbv: To be verified, PDD GL: PDD Guidelines, PA: Project Activities, PP: Project Participants, PoA: Programme of activities

TABLE-1 REQUIREMENTS CHECKLIST(POA) (OK/No/NA/Tbv)

PoA-DD Section	Check Points (according to EB 67 Annex 30 " Guidelines for Completing The Programme Design Document Form for Small-Scale CDM Programmes of Activities" (Version 02.0)	Reference GL,DD	Check Comment	CAR, CL, No.
A.2.	**Purpose and general description of the PoA:**			
	Include a description of the: (a) Policy/measure or stated goal that the PoA seeks to promote; (b) Framework for the implementation of the proposed PoA. Include a confirmation that the PoA is a voluntary action by the CME.	PoA DD	OK	
	Include a confirmation that the PoA is a voluntary action by the CME.	PoA DD	OK	
	Include a brief description of how the proposed PoA contributes to sustainable development (not more than one page).	PoA DD	OK	
A.3	**CMEs and participants of PoA**			
	Include: (a) Identity of the CME of the proposed PoA, as the entity which communicates with the Board; (b) Project participants to the PoA (project participants may or may not be involved in one of the component project activities (CPAs) related to the PoA).	PoA DD	OK	
A.4	**Party(ies)**			
	List in the table below Party(ies) and CMEs involved in the proposed PoA and provide contact information in Appendix 1.	PoA DD	NO	CAR-1
A.5.	**Physical/ Geographical boundary of the PoA**			
	Provide details of the defined boundary of the proposed PoA in terms of a geographical area (e.g. municipality, region within a country, country or several countries) within which all CPAs to be included in the PoA will be implemented.	PoA DD	OK	--
A.6.	**Technologies/measures**			--
	Describe the technologies and/or measures to be employed and/or implemented by the CPAs in the PoA. For the description of above, where relevant, consider applicable provisions for application of selected baseline and monitoring methodology for small-scale project activities in the Project standard. Do not provide information that is not essential to understanding the purpose of the PoA and how it reduces GHG emissions. Information related to equipment, systems and measures that are auxiliary to the main scope of the CPAs in the PoA and do not affect directly or indirectly GHG emissions and/or mass and energy balances of the processes related to the CPAs in the PoA should not be included.	PoA DD	OK	
A.7.	**Public funding of PoA**			
	Indicate whether the PoA receives public funding from Parties included in Annex I. If so: (a)Provide information on Parties providing public funding;	PoA DD	OK	--

CAR: Corrective Action Request, **CL**: Clarification Request, **FAR**: Forward Action Request,
NA: Not Applicable, Tbv: To be verified, PDD GL: PDD Guidelines, PA: Project Activities, PP: Project Participants, PoA: Programme of activities

TABLE-1 REQUIREMENTS CHECKLIST(POA) (OK/No/NA/Tbv)

PoA-DD Section	Check Points (according to EB 67 Annex 30 " Guidelines for Completing The Programme Design Document Form for Small-Scale CDM Programmes of Activities" (Version 02.0)	Reference GL,DD	Check Comment	CAR, CL, No.
	(b)Attach in Appendix 2: the affirmation obtained from such Parties in accordance with applicable provisions related to official development assistance in the Project standard.			
SECTION B.	**Demonstration of additionality and development of eligibility criteria**			
B.1.	**Demonstration of additionality for PoA**			
	Describe how in the absence of CDM, none of the implemented CPAs would occur.	PoA DD	OK	
B.2.	**Eligibility criteria for inclusion of a CPA in the PoA**		--	--
	Describe the eligibility criteria in accordance with the applicable provisions in the PoA standard.	PoA DD	Tbv	CL-1
B.3..	**Application of methodologies**			
	Describe the technology/measures and indicate the methodology chosen. In cases where multiple technologies/measures or multiple methodologies are being applied, list all the combinations of technologies/measures and methodologies that will be used in the PoA. If applicable, provide a description of the sampling plan and demonstrate how it meets applicable provisions in the "Standard for sampling and surveys for CDM project activities and programme of activities".	PoA DD	OK	
SECTION C.	**Management system**			
	Describe the management system in accordance with applicable provisions in the PoA standard.	PoA DD	OK	
SECTION D.	**Duration of PoA**			
D.1.	**Start date of PoA**			
	Describe how the start date was determined.	PoA DD	Tbv	CL-2
D.2.	**Length of the PoA**			
	State the length of the proposed PoA in years.	PoA DD	OK	
SECTION E.	**Environmental impacts**			
E.1.	**Level at which environmental analysis is undertaken**			
	Indicate whether the environmental analysis is performed at the PoA and/or the CPA level, and justify the choice of level at which the environmental analysis is undertaken.	PoA DD	OK	
E.2.	**Analysis of the environmental impacts**			
	If applicable, provide a summary of analysis of the environmental impacts and reference to all related documentation in accordance with applicable provisions related to environmental impacts for PoAs in the Project standard.	PoA DD	NA	

TABLE-1 REQUIREMENTS CHECKLIST(POA) (OK/No/NA/Tbv)

PoA-DD Section	Check Points (according to EB 67 Annex 30 " Guidelines for Completing The Programme Design Document Form for Small-Scale CDM Programmes of Activities" (Version 02.0)	Reference GL,DD	Check Comment	CAR, CL, No.
SECTION F.	**Local stakeholder comments**			
F.1.	**Solicitation of comments from local stakeholders**			
	Indicate whether the local stakeholder consultation process is performed at the PoA and/or the CPA level, and justify the choice of level at which the local stakeholder consultation is undertaken. Describe the process by which comments from local stakeholders were invited and compiled	PoA DD	OK	
F.2.	**Summary of comments received**			
	Identify stakeholders that have made comments and provide a summary of these comments.	PoA DD	NA	
F.3.	**Report on consideration of comments received**			
	Provide information demonstrating that all comments received have been considered	PoA DD	NA	
SECTION G.	**Approval and authorization**			
	Indicate whether the letter(s) of approval from Party(ies) which wishes to be involved in the PoA, is available at the time of submitting the PoA-DD to the validating DOE. If so, provide along with the PoA-DD the letter(s) of approval of the: (a) Party(ies) involved in the proposed PoA; (b) CME letters of authorization of its coordination of the PoA from each Party.	PoA DD	NO	CAR-2 CAR-3
PART II.	**Generic component project activity (CPA)**			
	Use this section to demonstrate the application of the PoA framework to implement generic CPAs and to demonstrate that each type of CPA meets the requirements. Where multiple technologies/measures and/or multiple methodologies are being applied, the demonstration of the application of the PoA framework to implement generic CPAs must be done for each of the combinations of technologies/measures and/or methodologies. Therefore, repeat all of Part II of these guidelines for each of the combination of technologies/measures and/or methodologies.	PoA DD	OK	
SECTION A.	**General description of a generic CPA**			
A.1.	**Purpose and general description of generic CPAs**			
	Provide a description of each generic CPA within the PoA.	PoA DD	OK	
SECTION B.	**Application of a baseline and monitoring methodology**			
B.1.	**Reference of the approved baseline and monitoring methodology(ies) selected**			
	Indicate exact reference (number, title, version) of: (a) The selected methodology (e.g. AMS-I.A. "Electricity generation by the user" (Version 14.0)) or multiple methodologies (see "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities");	PoA DD	OK	

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NA: Not Applicable, Tbv: To be verified, PDD GL: PDD Guidelines, PA: Project Activities, PP: Project Participants, PoA: Programme of activities

TABLE-1 REQUIREMENTS CHECKLIST(POA) (OK/No/NA/Tbv)

PoA-DD Section	Check Points (according to EB 67 Annex 30 " Guidelines for Completing The Programme Design Document Form for Small-Scale CDM Programmes of Activities" (Version 02.0)	Reference GL,DD	Check Comment	CAR, CL, No.
	(b) Any tools and other methodologies to which the selected methodology refers (e.g. "Tool to calculate the emission factor for an electricity system" (Version 02.2.1)). Refer to the UNFCCC CDM website for the exact reference of approved baseline and monitoring methodologies and tools. Note: Confirm that the selected methodology(ies) is(are) approved for application to CPAs under PoAs by the Board.			
B.2.	**Application of methodology(ies)**			
	Justify the choice of the selected methodology(ies) by showing that each generic CPA meets each applicability condition of the methodology(ies). If applicable, provide a general description of the sampling plan. Demonstrate that the CPA qualifies as Type I, II, and/or III during every year of the crediting period in accordance with applicable provisions for project activity eligibility in the Project standard. Explain documentation that has been used as a basis of justification and provide references or include the documentation in Appendix 3: below.	PoA DD	OK	
B.3.	**Sources and GHGs**			
	Describe the sources and GHGs included in each generic CPA boundary. Where possible, present a flow diagram physically delineating each generic CPAs, based on the descriptions provided in section A.6 "Technologies/measures" of Part I above. Include in the flow diagram all the equipment, systems and flows of mass and energy described in that section. In particular, indicate in the diagram the emissions sources and GHGs included in the project boundary and the data and parameters to be monitored.	PoA DD	OK	
B.4.	**Description of baseline scenario**			
	Describe how the baseline scenario is identified for each generic CPA. Explain how the baseline scenario is established in accordance with the selected methodology(ies) and applicable provisions for establishment and description of baseline scenarios in the Project standard. Where the procedure in the selected methodology(ies) involves several steps, describe how each step is applied and transparently document the outcome of each step. Explain and justify key assumptions and rationales. Provide and explain all data used to establish the baseline scenario (variables, parameters, data sources, etc.). Provide all relevant documentation and/or references. Provide a transparent description of the baseline scenario as established above. Note: The full description of the technology of the baseline scenario is to be provided in section A.6 of Part I above.	PoA DD	OK	

TABLE-1 REQUIREMENTS CHECKLIST(POA) (OK/No/NA/Tbv)

PoA-DD Section	Check Points (according to EB 67 Annex 30 " Guidelines for Completing The Programme Design Document Form for Small-Scale CDM Programmes of Activities" (Version 02.0)	Reference GL,DD	Check Comment	CAR, CL, No.
B.5.	**Demonstration of eligibility for a generic CPA**		--	--
	Demonstrate how each generic CPA meets the eligibility criteria of the PoA including confirmation of additionality of the generic CPA for its inclusion into the PoA.	PoA DD	OK	
B.6.	**Estimation of emission reductions of a generic CPA**			
B.6.1.	**Explanation of methodological choices**			
	Explain how the methods or methodological steps, in the selected methodology, for calculating baseline emissions, project emissions, leakage emissions and emission reductions are applied to each generic CPA. Clearly state which equations will be used in calculating emission reductions.	PoA DD	OK	
B.6.2.	**Data and parameters that are to be reported ex-ante**			
	Include a compilation of information on the data and parameters that are not monitored during the crediting period but are determined before the validation and remain fixed throughout the crediting period. Data that become available only after the registration/inclusion of the CPAs in the PoA (e.g. measurements after the implementation of the CPAs in the PoA) should not be included here but in the table in section B.7.1 below. The compilation of information may include data that are measured or sampled, and data that are collected from other sources (e.g. official statistics, expert judgment, proprietary data, IPCC, commercial and scientific literature, etc.). Data that are calculated with equations provided in the selected methodology(ies) or default values specified in the methodology(ies) should not be included in the compilation. For each piece of data or parameter, complete the table below, following these instructions: (a) "Value(s) applied": Provide the value applied. Where a time series of data is used, where several measurements are undertaken or where surveys have been conducted, provide detailed information in Appendix 4: below. To report multiple values referring to the same data or parameter, use one table. If necessary, reference(s) to electronic spreadsheets may be used; (b) "Choice of data": Indicate and justify the choice of data source. Provide clear and valid references and, where applicable, additional documentation in Appendix 4: below; (c) "Measurement methods and procedures": Where values are based on measurement, include a description of the measurement methods and procedures applied (e.g. which standards have been used), indicate the responsible person/entity that undertook the measurement, the date of the measurement and the measurement results. More detailed information can be provided in Appendix 4: below;	PoA DD	OK	

TABLE-1 REQUIREMENTS CHECKLIST(POA) (OK/No/NA/Tbv)

PoA-DD Section	Check Points (according to EB 67 Annex 30 " Guidelines for Completing The Programme Design Document Form for Small-Scale CDM Programmes of Activities" (Version 02.0)	Reference GL,DD	Check Comment	CAR, CL, No.
	(d) "Purpose of data": Choose one of the following: (i) Calculation of baseline emissions; (ii) Calculation of project emissions; (iii) Calculation of leakage.			
B.6.3.	**Ex-ante calculations of emission reductions**			
	Provide a transparent ex ante calculation of project emissions, baseline emissions (or, where applicable, direct calculation of emission reductions) and leakage emissions expected during the crediting period, applying all relevant equations provided in the selected methodology. For data or parameters available before validation, use values contained in the table in section B.6.2 above. For data/parameters not available before validation and monitored during the crediting period, use estimates for parameters contained in the table in section B.7.1 below. If any of these estimates has been determined by a sampling approach, provide a description of the sampling efforts in accordance with the "Standard for sampling and surveys for CDM project activities and programme of activities". Document how each equation is applied, in a manner that enables the reader to reproduce the calculation. Where relevant, provide additional background information and/or data in Appendix 4: including relevant electronic spreadsheets. Provide a sample calculation for each equation used, substituting the values used in the equations	PoA DD	OK	
B.7.	**Application of the monitoring methodology and description of the monitoring plan**			
B.7.1.	**Data and parameters to be monitored by each generic CPA**			
	Include specific information on how the data and parameters that need to be monitored would actually be collected during monitoring. Include here data that are determined only once for the crediting period but that will become available only after registration/inclusion of the CPAs in the PoA (e.g. measurements after the implementation of the CPAs in the PoA). For each piece of data or parameter, complete the table below, following these instructions: (a) "Source of data": Indicate the source(s) of data that will be used for the CPAs in the PoA (e.g. which exact national statistics). Where several sources may be used, justify which data sources should be preferred; (b) "Value(s) applied": The value applied is an estimate of the data/parameter that will be monitored during the crediting period, but is used for the purpose of calculating estimated emission reductions. To report multiple values referring to the same data or parameter, use one table. If necessary, reference(s) to electronic spreadsheets may be used;	PoA DD	OK	

TABLE-1 REQUIREMENTS CHECKLIST(POA) (OK/No/NA/Tbv)

PoA-DD Section	Check Points (according to EB 67 Annex 30 " Guidelines for Completing The Programme Design Document Form for Small-Scale CDM Programmes of Activities" (Version 02.0)	Reference GL,DD	Check Comment	CAR, CL, No.
	(c) "Measurement methods and procedures": Where data or parameters are to be monitored, specify the measurement methods and procedures, standards to be applied, accuracy of the measurements, person/entity responsible for the measurements, and, in case of periodic measurements, the measurement intervals; (d) "QA/QC procedures": Describe the Quality Assurance (QA)/Quality Control (QC) procedures to be applied, including the calibration procedures, where applicable; (e) "Purpose of data": Choose one of the following: (i)Calculation of baseline emissions; (ii)Calculation of project emissions; (iii)Calculation of leakage. Provide any relevant further background documentation in Appendix 5: below.			
B.7.2.	**Description of the monitoring plan for a generic CPA**			
	Describe the monitoring plan for a generic CPA developed in accordance with the approved monitoring methodology(ies). If data and parameters monitored in section B.7.1 above are determined by a sampling approach, provide a description of the sampling plan in accordance with the recommended outline for a sampling plan in the "Standard for sampling and surveys for CDM project activities and programme of activities". Provide any relevant further background information in Appendix 5:	PoA DD	OK	
Appendix 1:	**Contact information on entity/individual responsible for the PoA**			
.	For each organisation listed in section A.4 above, complete the table below, with the following mandatory fields: Organization, Street/P.O. Box, City, Postcode, Country, Telephone, Fax and E-mail, and Name of contact person. Copy and paste the table as needed.	PoA DD	OK	
Appendix 2:	**Affirmation regarding public funding**			
	If applicable, attach the affirmation obtained from Parties included in Annex I providing public funding to the PoA.	PoA DD	NA	
Appendix 3:	**Application of methodology(ies)**			
	Provide any further background information on the applicability of the selected methodology(ies).	PoA DD	OK	
Appendix 4:	**Further background information on ex ante calculation of emission reductions**			
	Provide any further background information on the ex-ante calculation of emission reductions. This may include data, measurement results, data sources, etc.	PoA DD	OK	
Appendix 5:	**Further background information on the monitoring plan**			
	Provide any further background information used in the development of the monitoring plan. This may include tables with time series data, additional documentation of measurement equipment, procedures etc.	PoA DD	OK	

TABLE-2 Resolution of Corrective Actions and Clarification Requests (PoA)

No. CAR, CL	Clarifications and corrective action requests by validation team	Sec. No. in TABLE-1	Summary of project owner response	Validation team Conclusion
CAR	**Corrective Action Requests**			
CAR-1	The Party(ies) and CMEs involved in the proposed PoA shall be listed in Section A.4 and contact information shall be provided in Appendix 1.	PART I A.4	The host party is South Africa. This is an unilateral project. Standard Bank Plc acts as both the CME and the CER buyer. Corrections have been made to version 5 of the PoA-DD to reflect this.	JCI has noted the clarification by the PO and confirmed the corrected PoA-DD were OK. CAR-1 was resolved and closed.
CAR-2	LoAs by the DNAs of Host Party RSA and Annex I Party UK shall be provided.	PART I SECTION G	The LoA of the DNAs of South Africa will be provided later. This is an unilateral project, therefore UK LoA is not required.	The LoA of the DNA of South Africa has been provided by the PP and JCI confirmed the LoA was appropriate and credible. CAR-2 was resolved and closed.
CAR-3	CME letters of authorization of its coordination of the PoA from each Party shall be provided.	PART I SECTION G	The CME letters of authorization from South Africa will be provided later.	MoC has been provided by the PP and JCI confirmed the MoC was appropriate and credible. CAR-3 was resolved and closed.
CL	**Clarification Requests**			
CL-1	It is requested to provide the documentary evidence of each Topic nos. 1) to 12) for general eligibility criteria as described in Section B.2 of the PDD.	PART I B.2	It is our understanding that the eligibility criteria should be demonstrated for each CPA, not the PoA. Therefore we seek clarification on how to provide documentary evidences for the general eligibility criteria at PoA level, or if those evidences should be just given at CPA level for the first CPA, Greefspan 11.029 MW Solar PV Project.	DOE has clarified its requirement to indicate the applicable documentary evidence to be referred on each CPA for the CME to justify the eligibility. JCI has confirmed the updated information in the DDs was OK. CL-1 was resolved and closed.
CL-2	It is requested to clarify how the start date of PoA was determined.	PART I D.1	In line with the Glossary of CDM terms (version 06.0, EB 66, Annex 63), the start date of the PoA is 27/02/2012, which is the day when the validation contract between the CME and the DOE came into force	JCI has noted the clarification by the PO and confirmed the revised DDs were OK. CL-2 was resolved and closed.
FAR	**Forward Action Requests**			
-				

CAR: Corrective Action Request, **CL**: Clarification Request, **FAR**: Forward Action Request,
NA: Not Applicable, Tbv: To be verified, PDD GL: PDD Guidelines, PA: Project Activities, PP: Project Participants, PoA: Programme of activities

Appendix A Protocol for CDM (CPA) Project

TABLE-1 REQUIREMENTS CHECKLIST (CPA) **(OK/No/NA/Tbv)**

CPA-DD Section	Check Points (according to EB 66 Annex 17 "Guidelines for Completing The Component Project Design Document Form for Small-Scale Component Project Activities" (Version 01.0)	Reference GL,DD	Check Comment	CAR, CL, No.
	General guidelines (CPA)	CPA GL	--	--
	Title of the project activity:	CPA GL	--	--
1.	When designing an actual CPA, the CPA implementer(s) must apply the provisions specified in the PoA.	CPA GL	OK	.
2.	Information used to: (a) demonstrate additionality; (b) describe the application of selected baseline and monitoring methodology(ies); and (c) support the environmental impact assessment, is not considered proprietary or confidential. Any data, values and formulae included in electronic spreadsheets provided must be accessible and verifiable	CPA GL	OK	
3.	The F-CDM-SSC-CPA-DD must be completed in English, and all attached documents must be in English or contain a full translation of relevant sections into English	CPA GL	OK	
4.	The F-CDM-SSC-CPA-DD must be completed using the same format without modifying its font, headings or logo, and without any other alteration to the form.	CPA GL	OK	
5.	Tables and their columns in the F-CDM-SSC-CPA-DD may not be modified or deleted, but rows may be added, as needed. Additional appendices may be added.	CPA GL	OK	
6.	If a section of the F-CDM-SSC-CPA-DD is not applicable, it must be explicitly stated that the section is left blank intentionally.	CPA GL	OK	
7.	The format used for presentation of values in the F-CDM-SSC-CPA-DD should be in an internationally recognized format, for example digits grouping should be done in thousands and a decimal point should be marked with a dot (.), not with a comma (,).	CPA GL	OK	
	Specific guidelines(CPA)		--	--
SECTION A.	**General description of CPA**			
A.1	**Title of the proposed or registered PoA**			
	Provide the reference and title of the PoA to which this CPA is included.	CPA DD	NO	CL-1
A.2.	**Title of the CPA**			
(a)	The title of the CPA and the unique identification of the CPA;	CPA DD	OK	
(b)	The current version number of the CPA-DD;	CPA DD	OK	
(c)	The date the CPA-DD was completed (DD/MM/YYYY).	CPA DD	OK	
A.3	**Description of the CPA**			

TABLE-1 REQUIREMENTS CHECKLIST (CPA) **(OK/No/NA/Tbv)**

CPA-DD Section	Check Points (according to EB 66 Annex 17 "Guidelines for Completing The Component Project Design Document Form for Small-Scale Component Project Activities" (Version 01.0)	Reference GL,DD	Check Comment	CAR, CL, No.
	Describe the technology(ies) and/or measures to be used by the CPA in accordance with the proposed or registered PoA, and in accordance with the applicable provisions in the Project standard.	CPA DD	OK	
A.4	**Entity/individual responsible for CPA**			
	Provide information on the CPA implementer(s). CPA implementers can be project participants of the PoA, under which the CPA is submitted, provided the name is included in the registered PoA	CPA DD	OK	
A.5.	**Technical description of the CPA**			
	Describe the technologies and/or measures to be employed and/or implemented by the CPA including a list of the facilities, systems and equipment that will be installed and/or modified by the CPA. This includes: (a) A list and the arrangement of the main manufacturing/production technologies, systems and equipment involved. Include in the description information about the age and average lifetime of the equipment based on manufacturer's specifications and industry standards, and existing and forecast installed capacities, load factors and efficiencies. The monitoring equipments and their location in the systems are of particular importance; (b) Energy and mass flows and balances of the systems and equipment included in the CPA; (c) The types and levels of services (normally in terms of mass or energy flows) provided by the systems and equipment that are being modified and/or installed under the CPA and their relation, if any, to other manufacturing/production equipment and systems outside the project boundary. The types and levels of services provided by those manufacturing/production systems and equipment outside the project boundary may also constitute important parameters of the description. The description should clearly explain how the same types and levels of services provided by the CPA would have been provided in the baseline scenario. For the description of above, where relevant, consider applicable provisions for application of selected baseline and monitoring methodology for small-scale project activities in the Project standard. Also provide a list of: (a) Facilities, systems and equipment in operation under the existing scenario prior to the implementation of the CPA; (b) Facilities, systems and equipment in the baseline scenario. If the baseline scenario is a continuation of current practice, thus identical to the scenario existing prior to the implementation of the CPA, there is no need to repeat the description of the scenarios, but only to state that both are the same.	CPA DD	Tbv	CL-2

TABLE-1 REQUIREMENTS CHECKLIST (CPA) **(OK/No/NA/Tbv)**

CPA-DD Section	Check Points (according to EB 66 Annex 17 "Guidelines for Completing The Component Project Design Document Form for Small-Scale Component Project Activities" (Version 01.0)	Reference GL,DD	Check Comment	CAR, CL, No.
	Do not provide information that is not essential to understanding the purpose of the CPA and how it reduces GHG emissions. Information related to equipment, systems and measures that are auxiliary to the main scope of the CPA and do not affect directly or indirectly GHG emissions and/or mass and energy balances of the processes related to the CPA should not be included.			
A.6.	**Party(ies)**			
	List in the following tabular format Party(ies) and CPA implementer(s) involved in the CPA and provide contact information in Appendix 1:.	CPA DD	NO	CAR-1
A.7.	**Geographic reference or other means of identification**			
	Provide geographic reference or other means of identification that allows for the unique identification of the CPA (maximum one page). For identification: in case of stationary CPAs provide geographic reference (e.g. map that identifies the location of the CPA); and in case of mobile CPAs provide means such as registration number of GPS devices.	CPA DD	OK	
A.8.	**Duration of the CPA**			
A.8.1.	**Start date of the CPA**			
	Indicate the start date (DD/MM/YYYY) and describe how the start date was determined.	CPA DD	Tbv	CL-3
A.8.2.	**Expected operational lifetime of the CPA**			
	State the expected operational lifetime of the CPA in years and months	CPA DD	OK	
A.9.	**Choice of the crediting period and related information**			
	State the type of crediting period chosen i.e. fixed or renewable.	CPA DD	OK	
A.9.1.	**Start date of the crediting period**			
	State the expected start date of the crediting period of the CPA (DD/MM/YYYY).	CPA DD	OK	
A.9.2.	**Length of the crediting period**			
	Indicate the length of the crediting period. In case a renewable crediting period is chosen, indicate the length of the first crediting period and the number of renewal periods. Ensure that the total renewal periods do not exceed the PoA validity period. Note: The duration of crediting period, fixed or renewable, of any CPA is limited to the end date of the PoA regardless of when the CPA was added.	CPA DD	OK	

TABLE-1 REQUIREMENTS CHECKLIST (CPA) **(OK/No/NA/Tbv)**

CPA-DD Section	Check Points (according to EB 66 Annex 17 "Guidelines for Completing The Component Project Design Document Form for Small-Scale Component Project Activities" (Version 01.0)	Reference GL,DD	Check Comment	CAR, CL, No.
A.10.	**Estimated amount of GHG emission reductions**			
	Provide the estimate of annual GHG emission reductions for each year of the crediting period and, the annual average and the total GHG emission reductions over the chosen crediting period (or the first crediting period)	CPA DD	OK	
A.11.	**Public funding of the CPA**			
	Indicate whether the PoA receives public funding from Parties included in Annex I. If so: (a)Provide information on Parties providing public funding; (b)Attach in Appendix 2: the affirmation obtained from such Parties in accordance with applicable provisions related to official development assistance in the Project standard	CPA DD	OK	
A.12.	**Debundling of small-scale component project activities**			
	Demonstrate that the CPA is not a debundled component of a large-scale activitiy, in accordance with the applicable provision of the "Guidelines on assessment of debundling for SSC project activities".	CPA DD	OK	
A.13.	**Confirmation for CPA**			
	Include a confirmation that the CPA is neither registered as an individual CDM project activity nor is part of another registered PoA.	CPA DD	Tbv	CL-4
SECTION B.	**Environmental analysis**			
B.1.	**Analysis of the environmental impacts**			
	Where the analysis of the environmental impacts is undertaken, provide a summary of analysis of the environmental impacts and reference to all related documentation, in accordance with the PoA.	CPA DD	OK	CL-5
SECTION C.	**Local stakeholder comments**			
C.1.	**Solicitation of comments from local stakeholders**			
	Describe the process by which comments from local stakeholders have been invited for the CPA.	CPA DD	Tbv	CL-6
C.2.	**Summary of comments received**			
	Identify stakeholders that have made comments and provide a summary of these comments.	CPA DD	Tbv	CL-6
C.3.	**Report on consideration of comments received**			
	Provide information demonstrating that all comments received have been considered. Note: If the stakeholder consultation information is provided at the PoA level, sections C.1 and C.2 should not be left blank but indicate here that the stakeholder consultation is provided at the PoA level.	CPA DD	Tbv	CL-6

TABLE-1 REQUIREMENTS CHECKLIST (CPA) **(OK/No/NA/Tbv)**

CPA-DD Section	Check Points (according to EB 66 Annex 17 "Guidelines for Completing The Component Project Design Document Form for Small-Scale Component Project Activities" (Version 01.0)	Reference GL,DD	Check Comment	CAR, CL, No.
SECTION D.	**Eligibility of CPA and estimation of emissions reductions**			
D.1.	**Title and reference of the approved baseline and monitoring methodology(ies) selected**			
	Identify the exact reference and title of the approved methodology(ies).	CPA DD	OK	
D.2.	**Application of methodology(ies)**			
	Demonstrate how the applicability conditions are met in accordance with the approved methodology(ies) and the PoA. Demonstrate that the CPA qualifies as Type I, II, and/or III during every year of the crediting period in accordance with applicable provisions for project activity eligibility in the Project standard. Explain documentation that has been used and provide references or include the documentation in Appendix 3:.	CPA DD	OK	
D.3.	**Sources and GHGs**			
	Describe the sources and GHGs included in the CPA boundary in accordance with the PoA. Provide proof that the CPA is located within the geographical boundary of the proposed or registered PoA. Use the table below to describe emission sources and GHGs included in the CPA boundary for the purpose of calculating project emissions and baseline emissions. Present a flow diagram physically delineating the CPA, based on the descriptions provided in section A.5. "Technical description of the CPA" above. Include in the flow diagram the equipment, systems and flows of mass and energy described in that section. In particular, indicate in the diagram the emissions sources and GHGs included in the project boundary and the data and parameters to be monitored.	CPA DD	OK	
D.4.	**Description of the baseline scenario**			
	Describe how the baseline scenario is identified for the CPA in accordance with the PoA.	CPA DD	OK	
D.5.	**Demonstration of eligibility for a CPA**			
	Demonstrate how each CPA meets the eligibility criteria of the PoA including confirmation of additionality of the CPA for its inclusion into the PoA.	CPA DD	Tbv	CL-7
D.6.	**Estimation of emission reductions**			
D.6.1.	**Explanation of methodological choices**			
	Explain how the methods or methodological steps, in the selected methodology, for calculating baseline emissions, project emissions, leakage emissions and emission reductions are applied to the CPA. Clearly state which equations will be used in calculating emission reductions in accordance with the PoA.	CPA DD	OK	
D.6.2.	**Data and parameters that are to be reported ex-ante**			
	Include a compilation of information on the data and parameters that are not monitored during the crediting period but are determined before the registration and remain fixed throughout the crediting	CPA DD	Tbv	CL-8

CAR: Corrective Action Request, **CL**: Clarification Request, **FAR**: Forward Action Request,
NA: Not Applicable, Tbv: To be verified, PDD GL: PDD Guidelines, PA: Project Activities, PP: Project Participants, PoA: Programme of activities

TABLE-1 REQUIREMENTS CHECKLIST (CPA) **(OK/No/NA/Tbv)**

CPA-DD Section	Check Points (according to EB 66 Annex 17 "Guidelines for Completing The Component Project Design Document Form for Small-Scale Component Project Activities" (Version 01.0)	Reference GL,DD	Check Comment	CAR, CL, No.
	period. Data that become available only after the registration of the CPA (e.g. measurements after the implementation of the CPA) should not be included here but in the table in section D.7.1 below. The compilation of information may include data that are measured or sampled, and data that are collected from other sources (e.g. official statistics, expert judgment, proprietary data, IPCC, commercial and scientific literature, etc.). Data that are calculated with equations provided in the selected methodology(ies) or default values specified in the methodology(ies) should not be included in the compilation. For each piece of data or parameter, complete the table below, following these instructions: (a) "Value(s) applied": Provide the value applied. Where a time series of data is used, where several measurements are undertaken or where surveys have been conducted, provide detailed information in Appendix 4: below. To report multiple values referring to the same data and parameter, use one table. If necessary reference(s) to electronic spreadsheets may be used; (b) "Choice of data": Indicate and justify the choice of data source. Provide clear and valid references and, where applicable, additional documentation in Appendix 4: below; (c) "Measurement methods and procedures": Where values are based on measurement, include a description of the measurement methods and procedures applied (e.g. which standards have been used), indicate the responsible person/entity that undertook the measurement, the date of the measurement and the measurement results. More detailed information can be provided in Appendix 4: below; (d) "Purpose of data": Choose one of the following: (i) Calculation of baseline emissions; (ii) Calculation of project emissions; (iii) Calculation of leakage.			
D.6.3.	**Ex-ante calculation of emission reductions**			
	Provide a transparent ex ante calculation of project emissions, baseline emissions, project emissions (or, where applicable, direct calculation of emission reductions) and leakage emissions expected during the crediting period, applying all relevant equations provided in the selected methodology. For data or parameters available before validation, use values contained in the table in section D.6.2 above. For data/parameters not available before validation and monitored during the crediting period, use estimates for parameters contained in the table in section D.7.1 below. If any of these estimates has been determined by a sampling approach, provide a description of the sampling efforts undertaken in accordance with the "Standard for sampling and surveys for CDM project activities and programme of activities". Document how each equation is applied, in a manner that enables the reader to reproduce the calculation. Where relevant, provide additional background information and/or data in Appendix 4: below, including	CPA DD	Tbv	CL-9

TABLE-1 REQUIREMENTS CHECKLIST (CPA) **(OK/No/NA/Tbv)**

CPA-DD Section	Check Points (according to EB 66 Annex 17 "Guidelines for Completing The Component Project Design Document Form for Small-Scale Component Project Activities" (Version 01.0)	Reference GL,DD	Check Comment	CAR, CL, No.
	relevant electronic spreadsheets. Provide a sample calculation for each equation used, substituting the values used in the equations.			
D.6.4.	**Summary of the ex-ante estimates of emission reductions**	CPA DD	OK	
D.7.	**Application of the monitoring methodology and description of the monitoring plan**			
D.7.1.	**Data and parameters to be monitored**			
	Include specific information on how the data and parameters that need to be monitored would actually be collected during monitoring. Include here data that are determined only once for the crediting period but that will become available only after registration/inclusion of the CPA in the PoA (e.g. measurements after the implementation of the CPA). For each piece of data or parameter, complete the table below, following these instructions: (a) "Source of data": Indicate the source(s) of data that will be used for the CPA (e.g. which exact national statistics). Where several sources may be used, justify which data sources should be preferred; (b) "Value(s) applied": The value applied is an estimate of the data/parameter that will be monitored during the crediting period, but is used for the purpose of calculating estimated emission reductions in section 0 above. To report multiple values referring to the same data and parameter, use one table. If necessary, reference(s) to electronic spreadsheets may be used; (c) "Measurement methods and procedures": Where data or parameters are to be monitored, specify the measurement methods and procedures, standards to be applied, accuracy of the measurements, person/entity responsible for the measurements, and, in case of periodic measurements, the measurement intervals; (d) "QA/QC procedures": Describe the Quality Assurance (QA)/Quality Control (QC) procedures to be applied, including the calibration procedures, where applicable; (e) "Purpose of data": Choose one of the following: (i) Calculation of baseline emissions; (ii) Calculation of project emissions; (iii) Calculation of leakage. Provide any relevant further background documentation in Appendix 5: below.	CPA DD	Tbv	CL-10
D.7.2.	**Description of the monitoring plan**			
	Describe the monitoring plan for the CPA in accordance with the approved monitoring methodology(ies). If data and parameters monitored in section D.7.1 above are determined by sampling approach, provide a description of the sampling plan in accordance with the recommended outline for a sampling plan in the "Standard for sampling and surveys for CDM project activities and programme of activities".	CPA DD	Tbv	CL-11 FAR-1

TABLE-1 REQUIREMENTS CHECKLIST (CPA) **(OK/No/NA/Tbv)**

CPA-DD Section	Check Points (according to EB 66 Annex 17 "Guidelines for Completing The Component Project Design Document Form for Small-Scale Component Project Activities" (Version 01.0)	Reference GL,DD	Check Comment	CAR, CL, No.
SECTION E.	**Approval and authorization**			
	Indicate whether the letter(s) of approval from each Party that wishes to be involved in the CPA, is available at the time of submitting the CPA-DD to the validating DOE. If so, provide along with the CPA-DD the letter(s) of approval of the Party(ies).	CPA DD	Tbv	CAR-2
Appendix 1:	**Contact information on entity/individual responsible for the CPA**			
.	For each organisation listed in section A.6, complete the table below, with the following mandatory fields: Organization, Street/ P.O. Box, City, Postcode, Country, Telephone, Fax, E-mail and name of contact person. Copy and paste the table as needed.	CPA DD	Tbv	CAR-1
Appendix 2:	**Affirmation regarding public funding**			
	If applicable, attach the affirmation obtained from Parties providing public funding to the CPA.	CPA DD	NA	
Appendix 3:	**Applicability of the selected methodology(ies)**			
	Provide any further background information on the applicability of the selected methodology(ies).	CPA DD	NA	
Appendix 4:	**Further background information on ex ante calculation of emission reductions**			
	Provide any further background information on the ex ante calculation of emission reductions. This may include data, measurement results, data sources, etc.	CPA DD	NA	
Appendix 5:	**Further background information on the monitoring plan**			--
	Provide any further background information used in the development of the monitoring plan. This may include tables with time series data, additional documentation of measurement equipment, procedures, etc.	CPA DD	NA	

TABLE-2 Resolution of Corrective Actions and Clarification Requests (CPA)

No. CAR, CL	Clarifications and corrective action requests by validation team	Sec. No. in TABLE-1	Summary of project owner response	Validation team Conclusion
CAR	**Corrective Action Requests**			
CAR-1	The Party(ies) and CPA implementer(s) involved in the CPA shall be listed in Section A.6 and contact information shall be provided in Appendix 1.	A.6	Following guidelines provided in Annex 17 of EB 66, *Guidelines for completing the component project design document form for small scale component project activities*, section A.6 requires one to provide information on the CPA implementer (in this case, AE-AMD). Information on the same should be provided in Appendix 1of the CPA-DD. This information has been included in the CPA-DD. Standard Bank Plc is not the CPA implementers and therefore they are not included in these sections.	JCI has noted the clarification by the PO and confirmed the revised CPA-DD was OK. CAR-1 was resolved and closed.
CAR-2	LoAs by the DNAs of Host Party RSA and Annex I Party UK shall be provided.	SECTION E	Letter of Approvals for the host party will be provided as described in version 5 of the PoA-DD and CAR-2 above. A separate letter of approval for the CPA implementing entity is not required since the CPA implementer is not a project participant. This follows guidelines provided in par 168-173 in Annex 5 of EB 65, the CDM Project Standard version 01.0 A LoA by the DNA of UK is not necessary as this is an unilateral project.	JCI has noted the PP's clarification of unilateral project. The LoA of the DNA of South Africa has been provided by the PP and JCI confirmed the LoA was appropriate and credible. CAR-2 was resolved and closed.
CL	**Clarification Requests**			
CL-1	It is requested to provide the reference and title of the PoA to which this CPA is included.	A.1	PoA title and CPA title have been corrected on the CPA-DD in accordance with the PoA-DD. Final PoA title is "South Africa Renewable Energy Programme (SA-REP), and CPA title "SA-REP – Greefspan 11.029 MW Solar PV Project"	JCI has noted the clarification by the PO and confirmed the revised DDs were OK. CL-1 was resolved and closed.
CL-2	It is requested to provide the specification of main facilities, systems and equipment which will be installed by the CPA.	A.5	Specification of main facilities, systems and equipment was expanded in the last CPA-DD version in section A.5, providing details on the PV modules, trackers, electric interconnection diagram components, and expected energy output, solar resources and technical losses.	JCI has confirmed the required information and documents were provided by the PO sufficiently and confirmed OK. CL-2 was resolved and closed.

TABLE-2 Resolution of Corrective Actions and Clarification Requests (CPA)

No. CAR, CL	Clarifications and corrective action requests by validation team	Sec. No. in TABLE-1	Summary of project owner response	Validation team Conclusion
CL-3	It is requested to clarify how the start date of the CPA was determined.	A.8.1	The start date of the CPA is estimation. The final CPA start date will be the date when the EPC contract with Tenesol has been signed, which the earliest date at which the either the implementation or construction or real action of the CDM project activity has begun in line with version 6 of the CDM glossary of terms. This contract is expected to be signed in the beginning of 2013 and will be updated in the next version of the CPA-DD. Latest estimation for 01/01/2013 has been updated in the CPA-DD.	JCI has noted the clarification by the PO and confirmed the revised CPA-DD was OK. CL-3 was resolved and closed.
CL-4	It is requested to provide the evidence of agreement between the CPA implementer(s) and the CME to ensure that the CPA is neither registered as an individual CDM project activity nor is part of another registered PoA.	A.13	Evidence has been provided in the ERPA, clause 13.1 (k) that states that the CPA implementer warrants that "it has not developed, and will not seek to develop, any of the Contracted CPA for inclusion in another CPA or POA". ERPA provided as reference 4.4	JCI has noted the clarification by the PO and confirmed the ERPA as evidence. CL-4 was resolved and closed.
CL-5	It is requested to provide the documentary evidence of EIA Report (EIAR) and the approval letter of EIAR by local authority.	B.1	EIAs for electricity-related developments are authorised at a national level by the Department of Environmental Affairs and not at local level. This has been described on page 3 of the project's final EIA report shared with the validator as reference 3.3. The Approval Letter from the Department of Environmental Affairs has been provided as reference 2.3. During the on-site visit interview with the environmental consultant, extra documentation on the process was shared directly with the DOE.	JCI has noted the clarification by the PO and confirmed the documentary evidences were OK. CL-5 was resolved and closed.
CL-6	It is requested to provide the records and the minutes of local stakeholder consultations.	C.1 C.2 C.3	Minutes for the first local stakeholder consultation, done for the EIA purpose, are provided as reference 5.18a. Records on the second stakeholder consultation for CDM purposes are provided as reference 5.18b (participant list), 5.17a, 5.17b, 5.17c (two newspaper ads, and the invitation letter) and 5.19a, 5.19b (thee two questionnaires received by stakeholders).	JCI has noted the clarification by the PO and confirmed the documentary evidences were OK. CL-6 was resolved and closed.

TABLE-2 Resolution of Corrective Actions and Clarification Requests (CPA)

No. CAR, CL	Clarifications and corrective action requests by validation team	Sec. No. in TABLE-1	Summary of project owner response	Validation team Conclusion
CL-7	It is requested to provide the documentary evidence of the followings. 1) The contract agreement with equipment supplier 2) The confirmation letter from the CPA to show that the CPA has not received funding from Annex I parties. 3) Plant Load Factor applied to the project 4) Operation experience of the 1998 trackers 1-axis vertical type in South Africa.	D.5	1) Final EPC contract will be provided once it is signed in the beginning of 2013. Draft EPC contract provided as reference 4.2a 2) Provided as reference 9.2 3) Plant load factor has been updated to 25.90%, which is the result of dividing the expected average energy delivered to the grid for the lifetime of the solar facility, 25,018 MWh, by the peak power output, 11.029 MW, multiplied per 8760 hours in a year. Evidences of the Energy Delivered to the Grid are provided in the *Review of solar irradiation data and yield assessment* as reference 3.1b, page 18, table 14. The Energy Delivered to the Grid has been calculated with the software, PVsyst, that has irradiation data for the project site from Meteonorm 6.1 Database. This software is the standard in the industry and it is accepted by the Department of Energy of South Africa. 4) Trackers have been extensively used all around Europe. In South Africa this technology has not been used before since there exists no solar photovoltaic project. The use of 1-axis trackers instead of 2-axis is due to the geographical latitude of South Africa. A tracker with 2-axis would not bring significant improvement of the production and it is not cost efficient.	JCI has noted the clarification by the PO and confirmed the revised CPA-DD and documentary evidences were OK. CL-7 was resolved and closed.

TABLE-2 Resolution of Corrective Actions and Clarification Requests (CPA)

No. CAR, CL	Clarifications and corrective action requests by validation team	Sec. No. in TABLE-1	Summary of project owner response	Validation team Conclusion
CL-7 (Cont'd)	5) The specific data of the facilities: - Efficiency of PV module to convert from the solar to electricity; - Internal power consumption; - Rate of transmission loss		5) - The efficiency of the PV module to convert from solar to electricity is 14.8%. as indicated in the Energy Yield Assessment, reference 3.1a. - Internal power consumption is not clarified, but the capacity of the auxiliary services that will be consuming electricity is 40,806 W, mostly due to the trackers. Evidence provided as reference 9.6 - Rate of transmission loss - based on references 3.1a and 3.1b page 7 and 14 respectively, losses due to grid connection were considered. This comprised of MV losses of 1.0% that are related to the step up transformer and the line losses that were considered negligible. The line losses are considered insignificant is because the length of the transmission line is only 45 meters.	

TABLE-2 Resolution of Corrective Actions and Clarification Requests (CPA)

No. CAR, CL	Clarifications and corrective action requests by validation team	Sec. No. in TABLE-1	Summary of project owner response	Validation team Conclusion
CL-8	It is requested to indicate or provide the copy of the relevant part of the documents such as IPCC showing the referenced data and parameters, for which default values are used.	D.6.2	The following default values are used: GWP_{CH4}: as per applied methodology AMS-I.D version 17 page 8 par 20 that elaborates on project emissions and refers to ACM0002. Version 13.0.0 of this methodology on page 14 indicates the default value to be used. EF_{Res}: as per applied methodology described above, page 15 of the methodology ACM0002 version 13.0.0 provided the default value that was applied. $NCV_{i,y}$: reference 9.3 which is an excerpt from the 2006 IPCC guidelines for national green house gas inventories. $EF_{CO2,i,y}$ and $EF_{CO2,m,i,y}$: reference 9.4 which is an excerpt from the 2006 IPCC guidelines for national green house gas inventories. $\eta_{m,y}$: reference 9.5 which is an excerpt from the latest version of the Tool to calculate the emission factor from an electricity system.	JCI has confirmed the required information and documents were provided by the PO sufficiently and confirmed OK. CL-8 was resolved and closed.
CL-9	It is requested to revise a font of "ω" as "w" in the equation as described in the referenced tool.	D.6.3	All equations in the PoA-DD and CPA-DD have been revised and now use "w_{OM}" and "w_{BM}"	JCI has confirmed the DDs were revised appropriately. CL-9 was resolved and closed.

TABLE-2 Resolution of Corrective Actions and Clarification Requests (CPA)

No. CAR, CL	Clarifications and corrective action requests by validation team	Sec. No. in TABLE-1	Summary of project owner response	Validation team Conclusion
CL-10	It is requested to provide the following data and drawing. 1) Specification of meters including accuracy; 2) Installed location of the monitoring meters; 3) Single line diagram showing the monitoring points; Note: Figure 9. Single Line Diagram described in the PDD is not visible.	D.7.1	1) Accuracy of the meters will be based on the NRS 057 standard provided by the National Energy Regulator of South Africa (NERSA). Reference 5.15. As described in table 1 of that document, the active energy meter will have an accuracy of 0,5 S and the reactive energy meter will have an accuracy of 2 since the project is expected to have a maximum export capacity of 10 MVA. This has been included in the CPA-DD in section D.7.2, under QA/QC heading. 2) The facility meter installation location will be at the terminal substation, on the project site, as indicated in the single line diagram provided as reference 6.3a, page 2. This single line diagram supersedes the previously provided single line diagrams. The system meter installation, the back up meter, will be located on the Greefspan Eskom Substation, but this one will not be property of the project developers. As the single line diagram has changed, the CPA-DD has been changed accordingly in the version 4, section D.7.2 3) As explained before, the single line diagram has been updated and provided as reference 6.3a. Page 2 shows the monitoring meters, which are the only monitoring points of the project.	JCI has confirmed the required information and documents were provided by the PO sufficiently and confirmed OK. CL-10 was resolved and closed.
CL-11	It is requested to provide the following documents. 1) Education and training manual; 2) Calibration and maintenance procedure of the meters; 3) Monitoring procedure manual;	D.7.2	1) No education and training manual is yet available, but schedule from the EPC contract on training is provided as reference 5.13. 2) Reference 5.15 shows the calibration requirements for the meters in sections 4.4.3, 4.4.6, and 4.7. Information on the calibration of the meters is also provided in the draft PPA as reference 4.7a, sections 12.6 and 12.7. 3) The CDM monitoring manual will not be available until the PoA has been registered, and it will be produced by the CME prior to the start of the crediting period. Therefore it is requested to be a Forward Action Request.	JCI has confirmed the clarification and information provided by the PO. JCI has also noted that the CDM monitoring manual will not be available until the PoA has been registered and will be produced by the CME prior to the start of the crediting period. CL-11 was closed and JCI has issued FAR-1 for this issue.

CAR: Corrective Action Request, **CL**: Clarification Request, **FAR**: Forward Action Request,
NA: Not Applicable, Tbv: To be verified, PDD GL: PDD Guidelines, PA: Project Activities, PP: Project Participants, PoA: Programme of activities

TABLE-2 Resolution of Corrective Actions and Clarification Requests (CPA)

No. CAR, CL	Clarifications and corrective action requests by validation team	Sec. No. in TABLE-1	Summary of project owner response	Validation team Conclusion
CL-12	It is requested to clarify the degradation of solar facility. In particular, the degradation from Year 1 to Year 2 shall be clarified in relation to Table 3 in section A.5 in the CPA-DD.	D.7.1	The degradation expressed in table 3 refers to the degradation at the end of year 1 (0.8%) and at the end of year 2 and afterwards (0.5%). However, the degradation value affecting to the energy delivered to the grid during year 1 is calculated as an average degradation. The energy delivered is calculated considering the degradation increases steadily through the year from zero to 0.8%, therefore the average degradation for the first year is 0.4% instead of 0.8%. (0% + 0.8%) / 2 = 0.4% Similar as with the first year of operation, the degradation for the second year decreases from 0.8% to 0.5%, therefore for the second year of operation the average degradation used to calculate the energy delivered to the grid is 0.65%. (0.8% + 0.5%) / 2 = 0.65% This explanation has been added as footnotes in the CPA-DD.	JCI has confirmed the clarification and information provided by the PO and the revised CPA-DD were OK. CL-12 was resolved and closed.
FAR	**Forward Action Requests**			
FAR-1	The monitoring manual shall be issued and its training shall be implemented before the start of verification stage.	D.7.2	The CDM monitoring manual will not be available until the PoA has been registered, and it will be produced by the CME prior to the start of the crediting period.	

APPENDIX B

Certificate of Appointment of Validation Team

Project Title	South Africa Renewable Energy Programme (SA-REP)
Applied Methodology	*AMS-I.D version 17*
	Sectoral Scope 1

Date: 13 March 2012

Designated Operational Entity: Japan Consulting Institute (JCI)

Reflecting the competence criteria of JCI in accordance with the latest "CDM Accreditation Standard for Operational Entities", this is to certify the appointment of validation team of JCI specified below for the CDM project activity above, as per CDM Project Activity Registration Form, and Validation Procedure established by JCI CDM Center.

Signature

Akio Yoshida,
Executive Director, JCI CDM Center

Date: 13 March 2012

Client: Standard Bank Plc

Reflecting the curricula vitae provided, this is to agree the validation team of JCI specified below for the CDM project activity above, as per Validation Procedure established by JCI CDM Center.

It is also agreed that Mr. **Mutsuo KATO** of JCI participates in the validation activities of the said project for the quality issues under its quality management scheme.

Signature

(Name) FENELLA AOUANE
(Title) SENIOR MANAGER

Validation Team

Validation Team	Name	Qualified Technical Areas related to the Project
Leader	*Shigeo AOKI*	*1.2 Energy generation from renewable energy source*
Member	*Toyoaki TSUNODA*	----------

Technical Reviewer	*Masaki OKADA*	*1.2 Energy generation from renewable energy source*