



VALIDATION REPORT

SAI MAITHILI POWER COMPANY PRIVATE
LIMITED

GRID CONNECTED SOLAR PHOTOVOLTAIC
POWER PLANT IN BIKANER, RAJASTHAN, INDIA

Report No: 53801712 – 12/399

Date: 2012-12-24

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Validation Report:	Report No.	Rev. No.	Date of 1st issue:	Date of this rev.
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Project:	Title:	Initial PDD Version:	Final PDD Version	
	Grid connected solar photovoltaic power plant in Bikaner, Rajasthan, India	2012-07-06	2012-12-19	
Project Participant(s):	Client:			
	Sai Maithili Power Company Private Limited			
	Non-Annex 1 country:	Annex 1 country:		
	India	Not applicable		
	PP from Non-Annex 1 country:	PP from Annex 1 country:		
	Sai Maithili Power Company Private Limited	Not applicable		
Applied methodology/ies:	Title:	No.:	Scope / TA:	
	Grid connected renewable electricity generation	AMS I.D ver.17	01 /1.2	
Validation team / Technical Review and Final Approval	Validation Team:	Technical review:	Final approval:	
	BJ MOHINDER N PREMJIT SINGH- AMARNATH-TEAM LEAD TEAM MEMBER R PRAKASH NARAYANAN-TEAM MEMBER	(OR)Saroj Sahoo (TR)Kunal Rami	Rainer Winter	
Expected Emission reductions: [t CO₂e]	Expected emission reductions over the first crediting period:		(Expected) starting date of the crediting period:	
	171,686		2013-02-26	
Confidential content:	<input type="checkbox"/> Yes		<input checked="" type="checkbox"/> No	
Key dates of validation:	Publication of PDD:	Draft Report issued:	On-site (from):	On-site (to):
	2012-08-15	2012-09-21	2012-09-14	2012-09-15
Summary of Validation Opinion:	<p>In detail the conclusions can be summarised as follows:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> The project is in line with all relevant host country criteria (India) and all relevant UNFCCC requirements for CDM. Project activity approval have been obtained from DNA of India vide the Letter of Approval (HCA) Ref No: 4/16/2012-CCC dated 2012.11.06 <input checked="" type="checkbox"/> The project is additional as per provisions of EB68 Annex 27 Version 09 "Guidelines on the demonstration of additionality of small scale project activities" paragraph 2. <input checked="" type="checkbox"/> The monitoring plan is transparent and adequate. <input checked="" type="checkbox"/> The calculation of the project emission reductions is carried out in a transparent and conservative manner, so that the calculated emission reductions of 171,686 t CO₂e are most likely to be achieved within the fixed crediting period of ten years. <input checked="" type="checkbox"/> The conclusions of this report show, that the project, as it was described in the project documentation, is in line with all criteria applicable for the validation. 			
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Bikaner, Rajasthan, India

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Abbreviations

BAU	Business as usual
CA	Corrective Action / Clarification Action
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CERC	Central Electricity Regulatory Commission
CL	Clarification Request
CO₂	Carbon dioxide
CO_{2e}	Carbon dioxide equivalent
CP	Certification Program
DNA	Designated National Authority
DvalR	Draft Validation Report
EB	CDM Executive Board
EIA	Environmental Impact Assessment
FAR	Forward Action Request
GHG	Greenhouse gas(es)
IPCC	Intergovernmental Panel on Climate Change
JNNSM	Jawaharlal Nehru National Solar Mission
MNRE	Ministry of New and Renewable Energy, Government of India
MOEF	Ministry of Environment and Forests, Government of India
NVVN	NTPC Vidyut Vyapar Nigam Limited
PDD	Project Design Document
PPA	Power Purchase Agreement
RERC	Rajasthan Electricity Regulatory Commission
QC/QA	Quality control/Quality assurance
SMPCL	Sai Maithili Power Company Private Limited
SPV	Solar Photo Voltaic
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard

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1 OBJECTIVE / SCOPE

The purpose of a validation is to have an independent third party assess the project design. In particular the project's baseline, the monitoring plan (MP), and the project's compliance with

- the requirements of Article 12 of the Kyoto Protocol;
- the CDM modalities and procedures as agreed in the Marrakech Accords under decision 3/CMP.1
- the annex to the decision;
- subsequent decisions made by COP/MOP & CDM Executive Board and
- other relevant rules, including the host country legislation and sustainability criteria

are validated in order to confirm that the project design as documented is sound and reasonable and meets the stated requirements and identified criteria. Validation is seen as necessary to provide assurance to stakeholders on the quality of the project and its intended generation of certified emission reductions (CERs).

The validation scope is given as a thorough independent and objective assessment of the project design including especially: the correct application of the methodology, the project's baseline study, additionality justification, local stakeholder commenting process, environmental impacts and monitoring plan, which are included in the PDD and other relevant supporting documents, to ensure that the proposed CDM project activity meets all relevant and applicable CDM criteria.

The information included in the PDD and the supporting documents were reviewed against the requirements as set out by the UNFCCC. The validation team has, based on the requirements in the Validation and Verification Standard^{VVS}, carried out a full assessment of all evidences to assess the compliance of the project with the key areas as outlined in section V.II. of the VVS (version 03.0, EB 70).

The validation is based on the information made available to TÜV NORD JI/CDM CP and on the contract conditions.

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

2 GHG PROJECT DESCRIPTION

2.1 Project Characteristics

Essential data of the project is presented in the following Table 2-1.

Table 2-1: Project Characteristics

Item	Data
Project title	Grid connected solar photovoltaic power plant in Bikaner, Rajasthan, India
Project size	<input type="checkbox"/> Large Scale <input checked="" type="checkbox"/> Small Scale
Project Scope (according to UNFCCC sectoral scope numbers for CDM)	<input checked="" type="checkbox"/> 1 Energy Industries (renewable- /non-renewable sources)
	<input type="checkbox"/> 2 Energy distribution
	<input type="checkbox"/> 3 Energy demand
	<input type="checkbox"/> 4 Manufacturing industries
	<input type="checkbox"/> 5 Chemical industry
	<input type="checkbox"/> 6 Construction
	<input type="checkbox"/> 7 Transport
	<input type="checkbox"/> 8 Mining/Mineral production
	<input type="checkbox"/> 9 Metal production
	<input type="checkbox"/> 10 Fugitive emissions from fuels (solid, oil and gas)
	<input type="checkbox"/> 11 Fugitive emissions from production and consumption of halocarbons and hexafluoride
	<input type="checkbox"/> 12 Solvents use
	<input type="checkbox"/> 13 Waste handling and disposal
	<input type="checkbox"/> 14 Afforestation and Reforestation
	<input type="checkbox"/> 15 Agriculture
Applied Methodology	AMS I.D ver.17
Technical Area(s)	1.2 Renewable Energies
Crediting period	<input type="checkbox"/> Renewable Crediting Period (7 y) <input checked="" type="checkbox"/> Fixed Crediting Period (10 y)
Start of crediting period	2013-02-26

2.2 Involved Parties and Project Participants

The following parties to the Kyoto Protocol and project participants are involved in this project activity (Table 2-2).

Table 2-2: Project Parties and project participants

Characteristic	Party	Project Participant
Non-Annex 1 Country	India	Sai Maithili Power Company Private Limited
Annex 1 Country	Not applicable	Not applicable

2.3 Project Location

The details of the project location are given in table 2-3:

Table 2-3: Project Location

No.	Project Location
Host Country	India
Region:	Rajasthan state
Project location address:	Gurha village, Kolayat Tehsil, Bikaner district
Latitude:	27 51' 50" North
Longitude:	72 50' 20" East

2.4 Technical Project Description

The candidate project activity involves solar power based renewable energy generation by installation of a 10 MWp grid-connected Solar Photovoltaic (PV) power plant at Gurha village of Bikaner district, in the Indian state of Rajasthan. The project activity is part of Phase I, Batch II¹ of the Jawaharlal Nehru National Solar Mission² (JNNSM) launched by the Government of India in 2010. The project proposes to generate clean electricity to the tune of 18.35 GWh during the first two years of operation (thereafter with a de-rating of 0.5% every year till the tenth year of operation) and thereby displacing equivalent amount of fossil-fuel intensive energy from the NEWNE grid. Thus, the project activity attempts to reduce 171,686 tCO_{2e} over the fixed crediting period of ten years.

Solar photovoltaic technology (SPV) is primarily a semiconductor-based technology used to convert solar radiation into direct electricity. A basic PV system typically comprises of PV modules and the balance of systems (BOS). Optionally it may include a maximum power point tracker (MPPT), battery system and charger, solar tracker, energy management software, solar concentrators or other equipment.

Components of PV system

A PV system typically consists of the following components:

- 1 PV panels (also known as solar panels)
- 2 Battery
- 3 Charge controller
- 4 Inverter/converter
- 5 Mounting structure and tracking device
- 6 Interconnections and other devices

Balance of systems includes support structure, wiring, storage, power electronics, etc. BOS (Balance of system) includes all the components mentioned above except

¹ http://www.nvvn.co.in/BII_Proj_FC_Achieved.pdf

² <http://www.mnre.gov.in/solar-mission/jnnsn/introduction-2/>

for the PV panels. In other words, a PV system consists of a PV panel and BOS. However component varies from application to application³.

The candidate project activity proposes to deploy Thin-film solar panels manufactured by MiaSole^{/miasole/} technologies, California, USA. The technical specifications^{/TECH/} of the proposed model MS140GG-02 (140 W) has been submitted and verified. The project activity is a Greenfield activity and at the time of validation site visit^{/IM01/} conducted from 2012.09.14 to 2012.09.15, it was observed that land leveling work was going on and no major project equipment was in place. However, by means of document verification and interview with project personnel, the technical details pertaining to the project was obtained. The technical specifications^{/TECH/} pertaining to the solar panel and inverter have been submitted and verified.

The technical key data are provided in table 2-4 below

Table 2-4: Technical data of the project activity

Parameter	Unit	Value
Technical Specification of Solar PV panel thin-film module		
Solar panel manufacturer	-	Miasole technologies, USA
Model	-	MS140GG-02
Cell type	-	Copper Indium Gallium Diselenide (CIGS)
Total installed DC capacity	MW	11.6
No. of modules	nos.	83, 272
Maximum Panel Voltage	V	29
Nominal Output	Wp	140
Number of cells	No	88
Voltage at maximum power point	Vm	23
Current at maximum power point	Im	6.09
Plant load factor	%	21
Technical specification of Inverter		
Inverter manufacturer	-	Schneider Electric
Inverter Series	-	Conext Core XC Series solar central inverters
Model no	-	XC 680
Type of cooling	-	Temperature-dependent forced convection cooling
Electrical specification of the Inverter (Input DC)		
Solar Photovoltaic power	kW	782
Input voltage range	V	550-800
Input voltage range, operating	V	550-850
Maximum input voltage, open circuit	V	1000
Maximum input current	A	1280
Electrical specification of the Inverter (Output AC)		
Nominal output power	kVA	680
Output voltage	V	380

³ http://www.indiaenergyportal.org/subthemes_link.php?themeid=1&text=solar

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Parameter	Unit	Value
Frequency	Hz	50/60
Nominal output current	A	1040
Power Factor	-	0.8 to 1 lead/lag
Harmonic distortion	%	<3% at rated power

3 METHODOLOGY AND VALIDATION SEQUENCE

3.1 Validation Steps

The validation of the project consisted of the following steps:

- Contract review
- Appointment of team members and technical reviewers
- Publication of the project design document (PDD)
- Desk review of the PDD and supporting documents
- Validation planning
- On-Site assessment
- Background investigation and follow-up interviews with personnel of the project developer and its contractors
- Draft validation reporting
- Resolution of corrective actions (if any)
- Final validation reporting
- Technical review
- Final approval of the validation

3.2 Contract review

To assure that

- the project falls within the scopes for which accreditation is held,
- the necessary competences to carry out the validation can be provided,
- Impartiality issues are clear and in line with the CDM accreditation requirements

a contract review was carried out before the contract was signed.

3.3 Appointment of team members and technical reviewers

On the basis of a competence analysis and individual availabilities, a validation team, consisting of one team leader and 2 additional team members, as well as the Technical Review personnel were appointed.

The list of involved personnel, the tasks assigned and the qualification status are summarized in the table 3-2 below.

Table 3-2: Involved Personnel

	Name	Company	Function ¹⁾	Qualification Status ²⁾	Scheme competence ³⁾	Technical competence ⁴⁾	Host country Competence	On-site visit
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	BJ Mohinder Amarnath	TUV India Private Limited	TL	LA	<input checked="" type="checkbox"/>	1.2	<input checked="" type="checkbox"/>	-
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	R Prakash Narayanan	TUV India Private Limited	TM ^{A)}	A	<input checked="" type="checkbox"/>	1.2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	N Premjit Singh	TUV India Private Limited	TM ^{A)}	LA	<input checked="" type="checkbox"/>	1.2	<input checked="" type="checkbox"/>	-
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Saroj Sahoo	TN CERT	OR ^{j)}	LA	<input checked="" type="checkbox"/>	1.2	<input checked="" type="checkbox"/>	-
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Kunal Rami	TN CERT	TR ^{B)}	LA	<input checked="" type="checkbox"/>	1.2.4	-	-
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Rainer Winter	TN CERT	FA ^{B)}	SA	<input checked="" type="checkbox"/>	1.2.4	-	-

¹⁾ TL: Team Leader; TM: Team Member, TR: Technical review; OT: Observer-Team, OR: Observer-TR; FA: Final approval

²⁾ GHG Auditor Status: A: Assessor; LA: Lead Assessor; SA: Senior Assessor; T: Trainee; TE: Technical Expert

³⁾ GHG auditor status (at least Assessor)

⁴⁾ As per S01-MU03 or S01-VA070-A2 (such as 1.1, 1.2, ...)

⁵⁾ In case of verification projects

A) Team Member: GHG auditor (at least Assessor status), Technical Expert (incl. Host Country Expert or Verification Expert), not ETE

B) No team member

All team members contributed to the review of documents, the assessment of the project activity and to the preparation of this report under the leadership of the team leader.

The site-visit^{/IM01/} was conducted from 2012.09.14 to 2012.09.15 by Mr. R Prakash Narayanan.

Statements of competence for the above mentioned team members are enclosed in annex 7 of this report.

3.4 Consideration of Public Stakeholder Comments

Acc. to the modalities and procedures, the draft PDD version 1 dated 2012.07.06, as received from the project participants, was made publicly available⁴ from 2012.08.15 to 2012.09.13 on the dedicated UNFCCC CDM website^{/unfccc/} prior to the validation activity commenced. Stakeholders had been invited to comment on the PDD within the 30 days public commenting period.

During the commenting period, no comments were received.

3.5 Validation Protocol

In order to ensure consideration of all relevant assessment criteria, a validation protocol is used. The protocol shows, in a transparent manner, criteria and requirements, means of validation and the results from pre-validating the identified criteria. The validation protocol reflects the generic CDM requirements each CDM project has to meet as well as project specific issues as applicable. The validation protocol serves the following purposes:

- It organises, details and clarifies the requirements that a CDM project is expected to meet;
- It ensures a transparent validation process where the validating entity will document how a particular requirement has been validated and the result of the determination.

The validation protocol is described in Figure 1.

⁴ <https://cdm.unfccc.int/Projects/Validation/DB/9WDHQYI6CWLON5Z734VGI8XU7PQXA7/view.html>

Validation Protocol Table A-1: Requirement checklist				
Checklist Item	Validation Team Comment	Reference	Draft Conclusion	Final Conclusion
<i>The checklist items in Table A-1 are linked to the various requirements the project should meet. The checklist is organised in various sections. Each section is then further subdivided as per the requirements of the topic and the individual project activity.</i>	<i>The section is used to elaborate and discuss the checklist item in detail. It includes the assessment of the validation team and how the assessment was carried out. The reporting requirements of the VVS shall be covered in this section.</i>	<i>Gives reference to the information source on which the assessment is based on</i>	<i>Assessment based on evidence provided if the criterion is fulfilled (OK), or a CAR, CL or FAR (see below) is raised. The assessment refers to the draft validation stage.</i>	<i>In case a corrective action or a clarification the final assessment at the final validation stage is given.</i>

Figure 1: Validation protocol table

The completed validation protocol is enclosed in Annex 1 to this report.

3.6 Review of Documents

The published PDD^{/PDD/} and supporting background documents^{/PO/TECH/PPA/} related to the project design and baseline were reviewed.

Furthermore, the validation team used additional documentation by third parties like host party legislation, technical reports referring to the project design or to the basic conditions and technical data.

3.7 Site Visit and Follow-up Interviews

The validation team represented by R Prakash Narayanan has carried out a site visit from 2012.09.14 to 2012.09.15 in order to assess the information included in the project documentation and to gain additional information regarding the compliance of the project with the relevant criteria applicable for CDM.

During validation the validation team has performed interviews to confirm selected information and to resolve issues identified in the document review. The main topics of the interviews are summarized in table 3-3.

Table 3-3: Interviewed persons and interview topics

Interviewed Persons / Entities	Interview topics
<u>Project proponent representatives</u> ^{/IM01/} Dr. B Jagannatha Rao, Senior GM, SMPCL Mr. K Krishnan Senior Manager-Projects, SMPCL Mr. Venkata Karthik Gudi SCM Engineer, SMPCL Mr. NVRC Balabhaskar AGM, SMPCL Mr. MH Sudarshankumar Civil Department, SMPCL	<ul style="list-style-type: none"> - Chronological description of the project activity with documents of key steps of the implementation. - Current status of plant design - Technical details of the project realization, project feasibility, designing, operational life time, monitoring of the project - Host Government Approval - Approval procedures and status - Monitoring and measurement equipment and system. - Financial aspects - Crediting period - Project activity starting date - CER allocation / ownership - Baseline study assumptions - Monitoring - Roles & responsibilities of the project participants w.r.t. project management, monitoring and reporting - National Legislation - Editorial issues of the PDD
<u>Project consultant</u> ^{/IM02/} Mr. Srinath Komarina Asst Manager, KPMG	
<u>Local Stakeholders</u> ^{/IM03/} Mr. Bagha Ram, Gurha village Mr. Lala Ram, Gurha village Mr. Ram Dayal, Gurha village Mr. Gukha Ram, Gurha village	<ul style="list-style-type: none"> - Sustainable development issues - Analysis of local stakeholder consultation

A comprehensive list of all interviewed persons is part of section 7 'References'.

3.8 Project comparison

As the project activity is small scale^{/PO/} and as the project employs solar PV technology based renewable energy generation which falls under the positive list^{/EB68Annex27/} of technologies which are deemed automatically additional, the validation team has exempted comparison of the proposed CDM project activity with similar projects or technology that have similar or comparable characteristics and with similar projects in the host country in order to achieve additional information.

3.9 Resolution of Clarification and Corrective Action Requests

3.9.1 Definition

A **Corrective Action Request (CAR)** will be established where:

- mistakes have been made in assumptions, application of the methodology or the project documentation which will have a direct influence the project results,
- the requirements deemed relevant for validation of the project with certain characteristics have not been met or
- there is a risk that the project would not be registered by the UNFCCC or that emission reductions would not be able to be verified and certified.

A **Clarification Request (CL)** will be issued where information is insufficient, unclear or not transparent enough to establish whether a requirement is met.

A **Forward Action Request (FAR)** will be issued when certain issues related to project implementation should be reviewed during the first verification.

3.9.2 Draft Validation

Further to the physical site visit, document verification and interview with project personnel conducted during the validation site visit^{/IM01/} from 2012.09.14 to 2012.09.15 and taking all other relevant information into account, the validation team issued findings in the course of a Draft Validation Report^{/DVR/} and handed this report over to the project proponent in order to respond on the issues raised and to revise the project documentation accordingly.

3.9.3 Final Validation

The final validation starts after issuance of the proposed corrective action (CA) of the CARs, CLs and FARs by the project proponent. The project proponent has to reply on those and the requests are “closed out” by the validation team in case the response is assessed as sufficient. In case of raised FARs the project proponent has to respond on this, identifying the necessary actions to ensure that the topics raised in this finding are likely to be resolved at the latest during the first verification. The validation team has to assess whether the proposed action is adequate or not.

In case the findings from CARs and CLs cannot be resolved by the project proponent or the proposed action related to the FARs raised cannot be assessed as adequate, no positive validation opinion can be issued by the validation team.

The CAR(s) / CL(s) / FAR(s) are documented in chapter 4.

3.10 Technical review

Before submission of the final validation report a technical review of the whole validation procedure is carried out. The technical reviewer is a competent GHG auditor being appointed for the scope this project falls under. The technical reviewer is not considered to be part of the validation team and thus not involved in the decision making process up to the technical review.

As a result of the technical review process the validation opinion and the topic specific assessments as prepared by the validation team leader may be confirmed or revised. Furthermore reporting improvements might be achieved.

3.11 Final approval

After successful technical review of the final report an overall (esp. procedural) assessment of the complete validation will be carried out by a senior assessor located in the accredited premises of TÜV NORD.

Only after this step the request for registration can be started (in case of a positive validation opinion).

4 VALIDATION FINDINGS

In the following table the findings from the desk review of the published PDD, visits, interviews and supporting documents are summarised:

Table 4-1: Summary of CARs, CLs and FARs issued

Validation topic ¹⁾	No. of CAR	No. of CL	No. of FAR
Description of project activity (A): - Project specification - Technical project description - Project Participants Technologies and/or measures	3	0	0
Application of selected approved baseline and monitoring methodology (B) - Application of the Methodology - Project Boundary - Baseline identification - Calculation of GHG emission reductions Project emissions Baseline emissions Leakage - Additionality determination - Monitoring Methodology - Monitoring Plan - Project management planning	8	1	0
Duration and Crediting Period (C)	1	2	0
Environmental impacts (D)	0	0	0
Local Stakeholder Consultation (E)	1	0	0
Approval, Authorization and other aspects (F): - Letter of Approval - Contribution to sustainable development - MoC - PDD editorial aspects	1	0	0
SUM	14	3	0

¹⁾ The letters in brackets refer to the validation protocol

The following tables include all raised CARs, CLs and FARs. For an in depth evaluation of all validation items it should be referred to the validation protocols (see Annex 1).

The findings of validation process are summarized in the tables below.

Finding	A1		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	In providing a description of the project activity under Section A.1 of the CDM-SSC-PDD: <ol style="list-style-type: none"> The title of the project activity has not been referred to as required by the CDM-SSC-PDD filling guidelines and the Project Standard. The estimate of the total GHG emission reductions for the chosen crediting period has not been provided. Further, what the chosen crediting period is has also not been stated. Associated checklist question(s): A.1.1 to A.2.4		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	<ol style="list-style-type: none"> The title of the project activity has been changed as per the title mentioned in the form submitted to UNFCCC for prior consideration of CDM. The chosen credit period as well as the total GHG emission reductions over the period have been incorporated in section A.1 of the revised PDD. 		
	<input checked="" type="checkbox"/> Changes in PDD	Section(s): A.1	New version No.: 2
	<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<ol style="list-style-type: none"> In the revised PDD version 2, the title page has now been corrected to Grid connected solar photovoltaic power <i>Project</i> in Bikaner, Rajasthan, India as against the earlier Grid connected solar photovoltaic power Plant in Bikaner, Rajasthan, India. However, as required by the Project Standard, the description under Section A.1 still does not incorporate the project title-issue open The chosen crediting period has now been stated as fixed period of ten years. This is consistent with Section C.2.1 of the PDD. However, the ex-ante estimate of annual average emission reductions over the fixed crediting period is provided as 17,911 tCO₂e and the total emission reductions over the entire fixed crediting period of ten years is provided as 179,110 tCO₂e under Section A.1-which is neither correct nor conservative. CAR A1 is open.		

Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	<ol style="list-style-type: none">1. The description under Section A.1 has been revised to include the project title as per the requirements of the project standard.2. The emission reductions had been calculated by considering a PLF of 21.46% as per the third party energy generation assessment study carried out for the project activity by AIC Projects GmbH which is in accordance with para 3 (b) of the “Guidelines for the reporting and validation of plant load factors” (EB48 Annex 11). However, the Power Purchase Agreement (PPA) signed for the project activity requires the grid utility to purchase only 18,396 MWh per annum. Hence, the PLF for the project activity is now being conservatively considered as only 21% so as to comply with the limit defined in the PPA. Further, an auxiliary consumption of 0.25% and a de-rating of 0.5% per annum after the second year are also being considered in accordance with the Rajasthan Electricity Regulatory Commission Tariff Order for solar PV plants dated 30/05/2012 (http://www.erc.rajasthan.gov.in/TariffOrders/Order127.pdf).3. The emission reductions have accordingly been revised to 17,169 tCO₂e per annum and the total emission reductions over the entire fixed crediting period of ten years to 171,686 tCO₂e which is conservative.		
	<input checked="" type="checkbox"/> Changes in PDD	Section(s): A.1	New version No.: 3
	<input checked="" type="checkbox"/> Changes in XLS	Worksheet(s): Emission Reductions	New version No.: 3
DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<ul style="list-style-type: none">• As required by the CDM filling guidelines in conjunction with the CDM Project Standard, the project title is provided under Section A.1 of the revised PDD version 3. The project title provided is found to be consistent with the project title in the CDM prior consideration notification but not with the Host Country Approval conferred by the Ministry of Environment and Forests, Government of India nor the submitted MoC copy-Issue open• The correct and conservative value for ex-ante estimate of emission reductions is now provided in Section A.1 of the PDD.• It has not been clarified under Section A.1 if the values provided for estimated net electricity supplied to the grid and the emission reductions are annual averages. <p>CAR A1 is open.</p>		

<p>Corrective Action #3</p> <p><i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i></p>	<ul style="list-style-type: none"> The title of the project activity has been revised in order to be consistent with the Host Country Approval and the Modalities of Communication Statement. Section A.1 and B.5 of the PDD have also been modified to include a reference to the title that was used in the intimation for prior consideration of CDM for the project activity. Section A.1 of the PDD has been revised in order to indicate that the estimated net electricity supplied to the grid and the emission reductions values are annual averages.
<p>DOE Assessment #3</p> <p><i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	<ul style="list-style-type: none"> The project title is mentioned in Section A.1 of the revised PDD version 4. The mentioned project title “Grid connected solar photovoltaic power plant in Bikaner, Rajasthan, India” is found to be in consistency with the Host Country Approval conferred by the MoEF, GOI and the submitted revised MoC copy. Section A.1 of the PDD version 4 has been revised to clarify that the values of 18019.7 MWh for net electricity export and 17,169 t CO₂ for the emission reductions, are annual averages. The issue is clarified. <p>CAR A1 is closed.</p>
<p>Conclusion</p> <p><i>Tick the appropriate checkbox</i></p>	<p><input type="checkbox"/> To be checked during the first periodic verification</p> <p><input type="checkbox"/> Additional action should be taken (finding remains open)</p> <p><input checked="" type="checkbox"/> The finding is closed</p>

Finding	A2
<p>Classification</p>	<p><input checked="" type="checkbox"/> CAR <input type="checkbox"/> CL <input type="checkbox"/> FAR</p>
<p>Description of finding</p> <p><i>Describe the finding in unambiguous style; address the context (e.g. section)</i></p>	<p><u>Under Section A.3:</u></p> <ol style="list-style-type: none"> The sectoral scope and type of the project activity has not been provided. Related to this, the project scale and type has also not been explicitly described. In the last paragraph, though it is claimed that the technology for the project is procured from World's well known manufacturers, it is further contradicted that there is no technology transfer associated with the project activity. <p>Associated checklist question(s): A.1.1 to A.2.4</p>

Finding	A2						
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	<p>1. As per the guidelines for completing the project design document form for small-scale CDM project, the Section A3 does not require the sectoral Scope, type of project activity and project scale to be mentioned there; however</p> <ul style="list-style-type: none"> the sectoral scope, and type of project activity have been mentioned in the introductory table and the project scale has been mentioned under section A1. <p>2. There is no technology transfer associated with the project activity. The same have been changed in the revised project document design as well.</p> <table border="1"> <tr> <td><input checked="" type="checkbox"/> Changes in PDD</td><td>Section(s): A.3</td><td>New version No.: 2</td></tr> <tr> <td><input type="checkbox"/> Changes in XLS</td><td>Worksheet(s):</td><td>New version No.:</td></tr> </table>	<input checked="" type="checkbox"/> Changes in PDD	Section(s): A.3	New version No.: 2	<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:
<input checked="" type="checkbox"/> Changes in PDD	Section(s): A.3	New version No.: 2					
<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:					
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<ul style="list-style-type: none"> The CDM-SSC-PDD filling guidelines, read in conjunction with the CDM project standard (Paragraph 31), warrants the specification of project scope, type and scale details to be provided under Section A in general. Notwithstanding, these requirements have not been explicitly mentioned anywhere in Section A of PDD version 2. - issue open. Whether, the project is benefitted by any technology transfer has still not been convincingly clarified-issue open. <p>CAR A2 is open.</p>						
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	<ul style="list-style-type: none"> The details regarding project scope, type and scale have been incorporated under section A.3 of the revised PDD. There has been no transfer of know-how to SMP CPL for the technology that is being used in the project activity. Hence, no technology transfer is involved. <table border="1"> <tr> <td><input checked="" type="checkbox"/> Changes in PDD</td><td>Section(s): A.3</td><td>New version No.: 3</td></tr> <tr> <td><input type="checkbox"/> Changes in XLS</td><td>Worksheet(s):</td><td>New version No.:</td></tr> </table>	<input checked="" type="checkbox"/> Changes in PDD	Section(s): A.3	New version No.: 3	<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:
<input checked="" type="checkbox"/> Changes in PDD	Section(s): A.3	New version No.: 3					
<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:					
DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<ul style="list-style-type: none"> As required by the CDM-SSC-PDD filling guidelines read in conjunction with the CDM Project Standard, the Project Scope, Type and Category have now been mentioned in Section A of the revised PDD version 3, under section A.3. Further the capacity of the project is also specified as 10 MW which enables inference of the project scale as a small scale project activity. The revised PDD version 3 unambiguously states that there is no technology transfer associated with the project activity. <p>CAR A2 is closed.</p>						
Conclusion <i>Tick the appropriate checkbox</i>	<table border="1"> <tr> <td><input type="checkbox"/> To be checked during the first periodic verification</td></tr> <tr> <td><input type="checkbox"/> Additional action should be taken (finding remains open)</td></tr> <tr> <td><input checked="" type="checkbox"/> The finding is closed</td></tr> </table>	<input type="checkbox"/> To be checked during the first periodic verification	<input type="checkbox"/> Additional action should be taken (finding remains open)	<input checked="" type="checkbox"/> The finding is closed			
<input type="checkbox"/> To be checked during the first periodic verification							
<input type="checkbox"/> Additional action should be taken (finding remains open)							
<input checked="" type="checkbox"/> The finding is closed							

Finding	A3		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<p><u>Under Section A.6:</u></p> <p>The de-bundling requirements have not been demonstrated with reference to the Project Standard as required by the CDM-SSC-PDD filling guidelines.</p> <p>Associated checklist question(s): A.2.4</p>		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	<p>As per the CDM Project Standard, Version 01.0 (EB 65, Annex 5) paragraph 88, project participants are required to follow the applicable provisions in the Guidelines on assessment of de-bundling for SSC project activities". The same has also been included in the revised PDD.</p>		
	<input checked="" type="checkbox"/> Changes in PDD	Section(s): A.6	New version No.: 2
	<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<p>In compliance to the stipulations of the CDM-SSC-PDD filling guidelines and the CDM Project Standard, the de-bundling requirements have now been demonstrated adverting to the "Guidelines on the assessment of de-bundling for SSC project activities in the revised PDD version 2.</p> <p>CAR A3 is closed.</p>		
Conclusion <i>Tick the appropriate checkbox</i>	<p><input type="checkbox"/> To be checked during the first periodic verification</p> <p><input type="checkbox"/> Additional action should be taken (finding remains open)</p> <p><input checked="" type="checkbox"/> The finding is closed</p>		

Finding	B1		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<p><u>Under Section B.2:</u></p> <p>The documentation that has been used as a basis for justification of the proposed project under the category of AMS ID version 17 has neither been provided in this section nor in Appendix 3, as required by the CDM-SSC-PDD filling guidelines.</p> <p>Associated checklist question(s): B.2.1 to B.2.2</p>		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	<p>The documentation that has been used as a basis for justification of the proposed project under the category of AMS ID version 17 has been provided in section B.2 and Appendix 3 as required by the CDM-SSC-PDD filling guidelines.</p>		
	<input checked="" type="checkbox"/> Changes in PDD	Section(s): B.2/Appendix 3	New version No.: 2
	<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:

Finding	B1						
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<ul style="list-style-type: none"> Under Section B.2, <ul style="list-style-type: none"> The documentation for applicability criterion no. 8 has not been explained. Further, other pertinent documentation (eg., PO, technical specifications) have also not been explained. Under Appendix 3 of the revised PDD, the applicability table of AMS ID version 17 has not been unambiguously used to justify applicability criteria. <p>CAR B1 is open.</p>						
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	<ul style="list-style-type: none"> The documentation for applicability criterion no. 8 has been revised to include Purchase Orders as well. Appendix 3 has been revised for the purpose of unambiguous justification of methodology applicability. <table border="1"> <tr> <td><input checked="" type="checkbox"/> Changes in PDD</td><td>Section(s): B.2/Appendix 3</td><td>New version No.: 3</td></tr> <tr> <td><input type="checkbox"/> Changes in XLS</td><td>Worksheet(s):</td><td>New version No.:</td></tr> </table>	<input checked="" type="checkbox"/> Changes in PDD	Section(s): B.2/Appendix 3	New version No.: 3	<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:
<input checked="" type="checkbox"/> Changes in PDD	Section(s): B.2/Appendix 3	New version No.: 3					
<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:					
DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<ul style="list-style-type: none"> Under Section B.2, <ul style="list-style-type: none"> The documentation for applicability criterion no.8 has now been explained. The solar panel supplier agreement has been verified to assess that the project activity is a new one and does not involved any replacement or retrofit. Further, during the validation site visit from 2012.09.14 to 2012.09.15, it was observed that the project is a Greenfield project. Other pertinent documents viz., supplier agreement with MiaSole have now been used for justification of applicable methodology provisions. Under Appendix 3 of the revised PDD version 3, the applicability table as per AMS ID version 17 has now been unambiguously applied to demonstrate conformity of the project activity to the applied methodology. <p>CAR B1 is closed.</p>						
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed						

Finding	B2
Classification	<input checked="" type="checkbox"/> CAR <input type="checkbox"/> CL <input type="checkbox"/> FAR

Finding	B2		
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<u>Under Section B.3:</u> 1. The project boundary has not been defined strictly as per the definition of AMS ID version 17 2. The pictorial depiction of the project boundary as required by the CDM-SSC-PDD filling guidelines is absent. Associated checklist question(s): B.3.1 to B.3.4		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	1. The project boundary has been defined as per AMS ID version 17. 2. The pictorial depiction has been added.		
	<input checked="" type="checkbox"/> Changes in PDD	Section(s): B.3	New version No.: 2
	<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<ul style="list-style-type: none">• The project boundary has now been revised as per the stipulation of AMS ID version 17.• The pictorial depiction of the project boundary has now been inserted in revised PDD version 2 and it now complements the textual description of the project boundary.• The version number of the methodology is not mentioned under this section. CAR B2 is open.		
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	<ul style="list-style-type: none">• Section B.3 of the PDD has been revised to include reference to the version number of the methodology.		
DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<ul style="list-style-type: none">• Section B.3 of revised PDD version 4 has been updated with version number 17 of applied methodology AMS ID. CAR B2 is closed.		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

Finding	B3
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Finding	B3		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding Describe the finding in unambiguous style; address the context (e.g. section)	<u>Under Section B.5:</u> 1. The description of Prior Consideration of CDM does not refer to applicable guideline requirement. 2. A description on how the start date of the project activity has been determined has not been provided. Thus, the prior consideration of CDM demonstration under this section is not transparent. Associated checklist question(s): B.5.2.1		
Corrective Action #1 This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.	1. The description of prior consideration of CDM has been revised to refer to the latest CDM Project Cycle Procedure Version 2. 2. The description of the determination of the start date of the project activity has been added.		
	<input checked="" type="checkbox"/> Changes in PDD	Section(s): B.5	New version No.: 2
	<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:
DOE Assessment #1 The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.	<ul style="list-style-type: none"> The description on Prior Consideration of CDM now appropriately refers to the CDM Project Cycle Procedure version 2.0-issue closed. The start dates of the project activity, as mentioned under this section and under Section C.1.1, are inconsistent with each other. Further it is unclear how the considered start date complies with the definition of 'Start date of the project activity' as per the CDM Glossary of terms-issue open. In Section B.5, under description on prior consideration, it has not been clarified if the prior consideration intimation was also provided to the DNA of the host country. In the same section, the sentence construction gives an impression that the prior consideration intimation was provided <i>after</i> the start date of the project activity, which is not true. CAR B3 is open.		
Corrective Action #2 This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.	The start date of the project activity has been rectified under section B.5. Further, the definition of 'Start date of the project activity' as per the CDM Glossary of terms has also been included in section C.1.1. Section B.5 of the PDD has been revised to clarify that the intimation for prior consideration of CDM was also sent to the National CDM Authority i.e. Host Party DNA of India. The section has also been revised to state that the intimation was done before the start date of the project activity.		
	<input checked="" type="checkbox"/> Changes in PDD	Section(s): B.5	New version No.: 3
	<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:

Finding	B3
DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<p>The start date of the project activity mentioned under Section B.5 is now consistent with Section C.1.1. Further, as required by the CDM-SSC-PDD filling guidelines, read in conjunction with the CDM Project Standard, a description of how the start date of the project activity has been determined has now been provided in the revised PDD version 3. During the validation site visit from 2012.09.14 to 2012.09.15 accompanied by document verification and interview with project personnel, it is hereby assessed that the consideration of MiaSole Solar Panel supply agreement dated 2012.06.29 commits the PP to a major project related expenditure relating to implementation of the project activity and hence is appropriately considered as the project start date. The PPA for the project had been signed between the PP and NVVN dated 2012.01.27. However, the PPA is an instrument which is revocable with respect to non-fulfilment of any conditions contained in it but the solar panel supplier agreement commits the PP to an irrevocable project related commitment. Besides, even consideration of the PPA signing date as the start date does not have any bearing on the prior consideration of the project as prior consideration intimation had been given on 2012.04.16 which is still within six months from signing of the PPA agreement. In revised version 4 of the PDD, it has now been clarified that the prior consideration intimation was also sent to the DNA of the host country India besides the UNFCCC Secretariat. Also, the sentence construction is revised to state that the prior consideration intimation had been issued to the DNA and the UNFCCC Secretariat even prior to the start date of the project activity. Thus, the DOE considers the reckoning of date of signing of the solar panel supplier agreement by the PP to be reasonably representing the start date of the project activity and which is also as per the CDM Glossary of terms. The DOE hereby concludes that there are no other dates prior to 2012.06.29 which can be reasonably considered as the project start date.</p> <p>CAR B3 is closed.</p>
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding	B4		
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR

Finding	B4		
Description of finding Describe the finding in unambiguous style; address the context (e.g. section)	Under Section B.6: 1. In page no 13 of the PDD, it is unclear why the reference under the share of low cost/must run table refers to the historic and obsolete versions of the CEA database. 2. In page no 14, under Step 4, which of the options as per the EF tool has been chosen, has not been clearly elucidated. Associated checklist question(s): B.5.7.1 to B.5.7.6		
Corrective Action #1 This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.	1. The reference under the share of low cost/must run table has been changed as per latest version of the CEA database. 2. Step 4 of the EF calculation has been revised to include the available options. It has also been mentioned that option A was chosen by the PP for calculation of simple OM.		
	<input checked="" type="checkbox"/> Changes in PDD	Section(s): B.6	New version No.: 2
	<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:
DOE Assessment #1 The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.	<ul style="list-style-type: none"> In page no 13 of the revised PDD version 2, the reference under the share of low cost/must-run table now refers to the version 7.0 of the CEA database which was the latest applicable version at the time of submission of the PDD to the DOE for webhosting. In Step 4 of the grid emission factor calculation, it has been mentioned that Option A of the emission factor calculation tool version 2.2.1 has been used for the computations. CL B4 is closed.		
Conclusion Tick the appropriate checkbox	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

Finding	B5		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding Describe the finding in unambiguous style; address the context (e.g. section)	In the submitted Grid Emission Factor calculation excel spreadsheet, the calculation of the Emission Factor provided does not follow tool to calculate emission factor properly the figures considered for Net Generation values in the 'Emission Factor' worksheet are not justifiable. Associated checklist question(s): B.5.7.1 to B.5.7.6		
Corrective Action #1 This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is	The calculation of the Emission Factor has been revised and the corrected Emission Factor calculation excel spreadsheet is being submitted.		
	<input checked="" type="checkbox"/> Changes in PDD	Section(s): B.6.1, B.6.2, B.6.3	New version No.: 2

Finding	B5		
<i>requested to indicate the revised sections as well as the new version No.</i>	<input checked="" type="checkbox"/> Changes in XLS	Worksheet(s):Emission factor	New version No.:2
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	In the revised emission reduction calculation sheet version 2, values for net generation which are sourced from CEA database version 7.0 are incorrect for 2009-10, grid imports had not been taken into consideration as per the emission factor calculation tool. CAR B5 is open.		
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	The calculation of Operating Margin emission factor has been revised by taking the imports values also into consideration in the calculation of net generation.		
	<input checked="" type="checkbox"/> Changes in PDD	Section(s): B.6.1, B.6.2, B.6.3	New version No.: 3
	<input checked="" type="checkbox"/> Changes in XLS	Worksheet(s):Emission factor	New version No.:3
DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	In the revised ER calculation sheet version 3, correct values for net generation in operating margin have now been considered for the year 2009-10, by appropriately including net grid imports. CAR B5 is closed.		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

Finding	B6		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<u>Under Section B.6.2:</u> 1. The determination of Operating margin emission factor is incorrect as net generation in the Operating Margin values have not been considered from the CEA database version 7.0 2. The computation of Combined Margin emission factor is incorrect in view of faulty assumptions. Please also refer to the submitted GEF calculation excel spreadsheet in this regard and please also refer to the above comment. Associated checklist question(s): B.5.7.1 to B.5.7.6		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the</i>	1. The erroneous values of net generation have been corrected in the calculation of the Operating margin emission factor. 2. The erroneous values of net generation have been corrected in the calculation of the Operating margin emission factor.		
	<input checked="" type="checkbox"/> Changes in PDD	Section(s): B.6.2	New version No.: 2

Finding	B6		
<i>revised sections as well as the new version No.</i>	<input checked="" type="checkbox"/> Changes in XLS	Worksheet(s):Emission factor	New version No.:2
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Under Section B.6.2: 1. The determination of Operating margin emission factor is incorrect 2. The computation of Combined Margin emission factor is incorrect in view of faulty assumptions. Please also refer to the submitted GEF calculation excel spreadsheet in this regard and please also refer to the above comment. CAR B6 is open.		
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	1. The calculation of Operating margin emission factor has been now been corrected. 2. The computation of Combined Margin emission factor has been revised to incorporate the corrected Operating margin emission factor.		
	<input checked="" type="checkbox"/> Changes in PDD	Section(s): B.6.2	New version No.: 3
	<input checked="" type="checkbox"/> Changes in XLS	Worksheet(s):Emission factor	New version No.:3
DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	In the revised ER calculation sheet version 3, consequent to the correct consideration of net generation in the operating margin values, the determination of Operating margin and Combined margin emission factors are now correct. The determined grid emission factor is thus correct. CAR B6 is closed.		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

Finding	B7		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR

Finding	B7		
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<u>Under Section B.6.3:</u> 1. The emissions reductions summary as provided under this section is ncorrect in view of the erroneous Grid Emission Factor computation. The determined emission reductions attributable to the project activity are not conservative. Further, the values as presented in this section are inconsistent with the submitted GEF calculation excel spreadsheet. 2. The value for the CUF utilized in the ER computations is unsupported. Further, how this value meets the requirements of EB 48 Annex 11 is also unclear. <u>Under Section B.6.4:</u> The tabulated ER summary is incorrect. Associated checklist question(s): B.5.7.1 to B.5.7.6		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	1. The Emission reductions summary has now been corrected as per the Grid Emission factor. The emission reductions have been determined as per the changed GEF calculation spreadsheet. 2. The Value for the CUF utilized in the ER computations has now been changed as per the supporting documents. <u>Under Section B.6.4:</u> The tabulated ER summary has now been corrected.		
	<input checked="" type="checkbox"/> Changes in PDD	Section(s): B.6.3 &B.6.4	New version No.: 2
	<input checked="" type="checkbox"/> Changes in XLS	Worksheet(s):Emission factor	New version No.:2
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<ul style="list-style-type: none">• In view of the continued faulty GEF calculation and the lack of clarity regarding the reckoned PLF value and non-consideration of de-rating and auxiliary consumption for the solar modules, the calculation of baseline emissions and hence the emission reductions is not transparent-issue open.• Why the CUF has changed from 19% in the hosted PDD to 21.46% in the revised PDD version 2 and how this CUF value satisfies the requirements of EB48 Annex11 is still unclear to the DOE-issue open.• As a corollary, the tabulated ER summary under section B.6.4 is also incorrect.• The source document for the PLF value considered has not been mentioned. CAR B7 is open.		

Finding	B7		
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	<ul style="list-style-type: none">• The GEF calculation has now been corrected. The source for PLF value has also been explained below. Further, a deration of 0.5% per annum after the second year has now been considered in emission reduction calculations in accordance with the Rajasthan Electricity Regulatory Commission Tariff Order for solar PV plants dated 30/05/2012 (http://www.erc.rajasthan.gov.in/TariffOrders/Order127.pdf). The calculation of emission reductions has been revised accordingly.• The CUF of 19% had been considered in the webhosted PDD based on an internal simulation conducted by KSK Surya Photovoltaic Venture Private Limited (a shareholder in SMPCPL) on PVSYST V5.52 software at the time of investment decision. Subsequently, the value had been revised in version 2 of the PDD to 21.46% as per the third party energy generation assessment study carried out for the project activity by AIC Projects GmbH which is in accordance with para 3 (b) of the “Guidelines for the reporting and validation of plant load factors” (EB48 Annex 11). However, the Power Purchase Agreement (PPA) signed for the project activity requires the grid utility to purchase only 18,396 MWh per annum. Hence, the PLF for the project activity is now being conservatively considered as only 21% so as to comply with the limit defined in the PPA. Further, an auxiliary consumption of 0.25% and a deration of 0.5% per annum after the second year is also being considered in accordance with the Rajasthan Electricity Regulatory Commission Tariff Order for solar PV plants dated 30/05/2012 (http://www.erc.rajasthan.gov.in/TariffOrders/Order127.pdf).• The tabulated ER summary under section B.6.4 of the PDD has been accordingly revised.• The source document for the PLF value has been included in section B.6.3 of the revised PDD in foot note 5.		
	<input checked="" type="checkbox"/> Changes in PDD	Section(s): B.6.3 & B.6.4	New version No.: 3
	<input checked="" type="checkbox"/> Changes in XLS	Worksheet(s):Emission factor	New version No.:3
	DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<ul style="list-style-type: none">• The grid emission factor calculation has been rectified and is now correct. Further as per the RERC tariff order dated 2012.05.30, a de-ration factor of 0.5% has been applied from after the second year of generation onwards and an auxiliary consumption of 0.25% of gross energy generation has been considered from the first year. Thus, the baseline emissions calculations have now been revised and are now estimated at 17,483 tCO₂ per annum for the first and second year of operation of the plant. From the third year to the end of crediting period of ten years, a de-ration factor of 0.5% is applied. As per AMS ID version 17, there are no project emissions and	

Finding	B7
	<p>leakages associated with the proposed CDM project activity. Therefore, the emission reductions pertaining to the project is determined as 17,483 tCO₂ per annum for the first and second year of operation and an average annual emission reduction of 17,169 tCO₂. Thus, the total emission reductions pertaining to the project determined at 171,686 tCO₂ over the entire fixed crediting period of ten years is assessed to be correct and conservative.</p> <ul style="list-style-type: none"> In the web hosted PDD, a CUF value of 19% had been considered. This was based on a simulation study conducted by KSK Surya Photovoltaic Venture Private Limited. The study report has been submitted for validation. However, to meet the requirements of EB48 Annex 11 requirements, the PP has commissioned an independent engineering consultant to determine the PLF pertaining to the project activity. This study titled "Yield assessment of 10 MW PV Power Plant" dated 2012.07.27 has been submitted for validation as per which the PLF has been determined to be 21.46%. However, during document verification, it was found from the signed PPA clause 4.4.1 (page 15) that NVVN is not obliged to purchase energy beyond 18.396 Million kWh in any generating year, which works out to a PLF of 21%. Thus, as a conservative approach, PLF of 21% has been considered in determination of emission reductions. As this is in conformity to EB48 Annex 11 requirements and is also conservative to the third party determined value of 21.46%, the PLF value of 21% is accepted. Consequent to the corrected calculation of grid emission factor and the determined PLF of 21%, the emission reductions summary table has now been revised under Section B.6.4 of the final PDD version 4 submitted for registration. The PLF is a conservative and calculated value obtained from paragraph 4.4.1 of the signed PPA agreement dated 2012.01.27. The source document of the considered PLF value is now clarified in foot note 5 of the revised PDD version 4. <p>CAR B7 is closed.</p>
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding	B8		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR

Finding	B8		
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Under Section B.7.1: <ol style="list-style-type: none"> 1. The basis for the value of 16,206 MWh/ year reckoned is unclear to the DOE. Further, why there is a discrepancy in this value with the value for the same parameter under section B.6.3 has also not been clarified. 2. If is unclear if grid electricity import for auxiliary consumption purposes is also being monitored separately by separate meters. 3. Though the monitoring frequency has been mentioned, the recording frequency has not been explained. 4. Consistency in the name of the PP is not being preserved throughout this document. In this instance, the PP is referred to as "power producer". <p>Associated checklist question(s): B.5.8.1 to B.5.8.7</p>		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	<ol style="list-style-type: none"> 1. The value has been changed to 18,799 supported by documentary evidence. 2. For ex-ante calculation of emission reductions, it has been assumed that there is no electricity import by the project activity. 3. The monitoring and recording frequency has now been included. 4. The same has been changed in the section B.7.1 of the PDD. 	<input checked="" type="checkbox"/> Changes in PDD	<div> Section(s): B.7.1 </div> <div> New version No.: 2 </div>
	<input checked="" type="checkbox"/> Changes in XLS	<div> Worksheet(s):Electricity generation & Emission reductions </div>	<div> New version No.:2 </div>
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<ol style="list-style-type: none"> 1. What documentary evidence has been provided to support the consideration of 18,799 MWh/year has not been explained in the corrective action-issue open. 2. If grid electricity import would be monitored separately by separate meters has not been clarified. Further, it has not been clarified if the ABT meter provides import and export reading separately which will enable the PP to calculate the difference, or the ABT meter just provides the net reading -issue open. 3. The recording frequency of the net electricity exported to the grid by the project activity is now mentioned as 'monthly'-issue closed. 4. Instead of 'power producer', correction has now been undertaken to correctly and consistently refer to the PP as SMP CPL-issue closed. <p>CL B8 is open.</p>		

Finding	B8		
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	1. The PLF value of 21.46% and corresponding generation of 18,799 MWh/year had been considered in version 2 of the PDD as per the third party energy generation assessment study carried out for the project activity by AIC Projects GmbH which is in accordance with para 3 (b) of the “Guidelines for the reporting and validation of plant load factors” (EB48 Annex 11).However, the Power Purchase Agreement (PPA) signed for the project activity requires the grid utility to purchase only 18,396 MWh per annum. Hence, the PLF and corresponding energy generation for the project activity are now being conservatively considered as 21% and 18,396 MWh respectively so as to comply with the limit defined in the PPA. Further, an auxiliary consumption of 0.25% and a deration of 0.5% per annum after the second year is also being considered in accordance with the Rajasthan Electricity Regulatory Commission Tariff Order for solar PV plants dated 30/05/2012 (http://www.erc.rajasthan.gov.in/TariffOrders/Order127.pdf).		
	2. The table in section B.7.1 of the PDD is being revised to mention that both, the electricity exported to and imported from the grid, would be measured by the same main and check meters. Further, it is also being clarified that the ABT main and check meters will provide import and export readings separately and the difference would be calculated by the Grid Utility and SMPCPL to arrive at the net electricity supplied to the grid.		
	<input checked="" type="checkbox"/> Changes in PDD	Section(s): B.7.1	New version No.: 3
<input checked="" type="checkbox"/> Changes in XLS	Worksheet(s): Electricity generation & Emission reductions	New version No.:3	
DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	1. Under Section B.7.1 of the revised PDD version 3, the value for the sole monitoring parameter “net electricity exported to the grid in year y” is now considered as 18,350 MWh for the first and second year of operation based upon 21% PLF reckoned from the provisions of the signed PPA. From the third year of operation onwards, a de-ration factor of 0.5% in generation is applied which is in conformity to RERC tariff order dated 2012.05.30. The considered value is determined to be appropriate.		
	2. It is now clarified that the main and check meters are bi-directional which account for grid electricity export and import and thus would accurately assist in calculating the net electricity export pertaining to the project activity jointly by the PP and the utility representative and recording it in Joint Meter Reading sheets.		
CAR B8 is closed.			

Finding	B8
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding	B9								
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR						
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<u>Under Section B.7.3:</u> <div>1. The textual description and the pictorial depiction of the operation and management structure associated with the proposed CDM project activity are internally inconsistent with each other.</div> <div>2. Abbreviations like ABT have not been expanded for ease of comprehension and clarity</div> <div>3. Foot note 6 does not refer to the correct name of the appropriate CDM guideline document. Further it is unclear what the industry standard and the applicable local regulations are.</div> <div>Associated checklist question(s): B.5.8.1 to B.5.8.7</div>								
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	<div>1. The textual description associated with the proposed CDM project activity have been rectified as per the pictorial depiction of the operation and management structure.</div> <div>2. The ABT abbreviation has been expanded for ease of comprehension and clarity.</div> <div>3. The reference to the Indicative simplified baseline and monitoring methodologies for selected small scale CDM project activity categories Version 12 has now been inserted.</div> <table><tr><td><input type="checkbox"/> Changes in PDD</td><td>Section(s): B.7.3</td><td>New version No.: 2</td></tr><tr><td><input type="checkbox"/> Changes in XLS</td><td>Worksheet(s):</td><td>New version No.:</td></tr></table>			<input type="checkbox"/> Changes in PDD	Section(s): B.7.3	New version No.: 2	<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:
<input type="checkbox"/> Changes in PDD	Section(s): B.7.3	New version No.: 2							
<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:							
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<div>1. The textual description and the pictorial depiction of the O&M structure has now been made consistent in revised PDD version 2. However, from the picture it is unclear what/who the 'SPV staff' is-issue open.</div> <div>2. Abbreviations have not been expanded for ease of comprehension and clarity. Alternatively, an index of abbreviations has also not been provided-issue open.</div> <div>3. As the PPA has already been signed, if the calibration frequency as stated in the revised PDD is in compliance with the relevant provisions of the PPA has not been clarified-issue open.</div> <div>4. In the apportioning of electricity text, units have not been mentioned for parameters.</div> <div>CAR B9 is open.</div>								

Finding	B9		
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	1 .The head of SPV staff in the O&M structure has now been removed.		
	2. All abbreviations have been expanded in the revised PDD.		
	3. The calibration frequency has been kept as once in three years in accordance with the guidelines mentioned in the Indicative simplified baseline and monitoring methodologies for selected small scale CDM project activity categories Version 12. This is conservative as compared to the PPA requirement for all meters to be calibrated in accordance with the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 (http://www.cea.nic.in/reports/regulation/meter_reg.pdf) which states in para 18 (1) (b) that all meters are to be tested once in five years.		
	4. The text for apportioning of electricity has been revised to include units of measurement.		
	<input checked="" type="checkbox"/> Changes in PDD	Section(s): B.7.3	New version No.: 3
	<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:
DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	1. The pictorial representation of the CDM management structure is now in line with the textual description. The irrelevant reference to ‘SPV staff’ has now been removed.		
	2. Abbreviations are observed to have been expanded for better comprehension throughout the document		
	3. The copy of submitted PPA has been checked which prescribes calibration of the energy meters at least once in five years. Thus, the stated calibration frequency of at least once in three years is assessed to be appropriate.		
	4. Under apportioning of electricity, correct units have now been mentioned for various parameters.		
	CAR B9 is closed.		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

Finding	C1
Classification	<input checked="" type="checkbox"/> CAR <input type="checkbox"/> CL <input type="checkbox"/> FAR

Finding	C1								
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<u>Under Section C.1.1:</u> <div>1. This section refers to an obsolete guideline requirement EB 41 paragraph 67.</div> <div>2. This section is not filled as per the guidelines to completing the CDM-SSC-PDD</div> <div>Associated checklist question(s): C.1.1</div>								
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	<div>1 This section has been revised as per the requirements of the Guidelines for completing SSC PDD Version 1.0.</div> <div>2. This section has been revised as per the requirements of the Guidelines for completing SSC PDD Version 1.0.</div> <table><tr><td><input checked="" type="checkbox"/> Changes in PDD</td><td>Section(s): C.1.1</td><td>New version No.: 2</td></tr><tr><td><input type="checkbox"/> Changes in XLS</td><td>Worksheet(s):</td><td>New version No.:</td></tr></table>			<input checked="" type="checkbox"/> Changes in PDD	Section(s): C.1.1	New version No.: 2	<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:
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<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:							
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<div>1. The obsolete guideline requirement EB 41 paragraph 67 has been removed but has not been supplanted with its equivalent, latest and relevant guidance-issue open.</div> <div>2. Further, how the start date has been determined has not been explained and the evidence for supporting the start date has not been explained in detail-issue open.</div> <div>CAR C1 is open.</div>								
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	<div>1. Section C.1.1 has been revised to refer to the latest version of Glossary of CDM Terms for definition of start date.</div> <div>2. Section C.1.1 has been revised to explain how the start date has been determined including a reference to the supporting document.</div> <table><tr><td><input checked="" type="checkbox"/> Changes in PDD</td><td>Section(s): C.1.1</td><td>New version No.: 3</td></tr><tr><td><input type="checkbox"/> Changes in XLS</td><td>Worksheet(s):</td><td>New version No.:</td></tr></table>			<input checked="" type="checkbox"/> Changes in PDD	Section(s): C.1.1	New version No.: 3	<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:
<input checked="" type="checkbox"/> Changes in PDD	Section(s): C.1.1	New version No.: 3							
<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:							

Finding	C1
DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<ul style="list-style-type: none"> Section C.1.1 now includes the reference to the latest applicable version of the CDM glossary of terms and is correct. Under this section, the determination of the start date of the project activity has now been explained clearly. This is in accordance with the definition of start date as per the CDM Glossary of terms. The start date is 2012.06.29 which is the date of supply agreement made by the PP with MiaSole Technologies for supply of solar panels. This commits the PP to a major project related expenditure. Further, during the validation site visit, document verification and interview with project personnel during 2012.09.14 to 2012.09.15, it was corroborated by the DOE that no other significant investment pertaining to the project had been carried out by the PP prior to 2012.06.29. Related to this item, please also refer to CAR B3 for a detailed assessment on the start date of the project activity. <p>CAR C1 is closed.</p>
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding	C2		
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<u>Under Section C.1.2:</u> The expected operational lifetime of the project activity is not borne out by any documentary supporting evidence. Associated checklist question(s): C.1.2		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	The operational lifetime of the project activity can be verified from the Mia Sole MS Series 02, CIGS module technical document. The same is also being submitted to the DOE.		
	<input checked="" type="checkbox"/> Changes in PDD	Section(s): C.1.2	New version No.: 2
	<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The technical specifications for the Solar PV panels have been submitted which have been issued by the manufacturer MiaSole from which it is verified that the life time is at least ten years. CL C2 is closed.		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

Finding	C3								
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR						
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<p><u>Under Section C.2.2:</u></p> <p>The start date of the crediting period appears to be ambitious and it has not been clarified if it needs amendment with a more pragmatic start date.</p> <p>Associated checklist question(s): C.1.3</p>								
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	<p>The start date has been revised to the date of signing of the Module Supply Agreement for procurement of Solar PV Modules. The same is also being submitted to the DOE.</p> <table border="1"> <tr> <td><input checked="" type="checkbox"/> Changes in PDD</td><td>Section(s): C.2.2</td><td>New version No.: 2</td></tr> <tr> <td><input type="checkbox"/> Changes in XLS</td><td>Worksheet(s):</td><td>New version No.:</td></tr> </table>			<input checked="" type="checkbox"/> Changes in PDD	Section(s): C.2.2	New version No.: 2	<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:
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<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:							
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<p>The corrective action provided above is irrelevant to the finding raised. The starting date of the crediting period is not realistic.</p> <p>CL C3 is open.</p>								
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	<p>The start date of the crediting period has been revised to the proposed date of commissioning of the project activity i.e. 26 February 2013 mentioned on page 9 of the PPA.</p> <table border="1"> <tr> <td><input checked="" type="checkbox"/> Changes in PDD</td><td>Section(s): C.2.2</td><td>New version No.: 3</td></tr> <tr> <td><input type="checkbox"/> Changes in XLS</td><td>Worksheet(s):</td><td>New version No.:</td></tr> </table>			<input checked="" type="checkbox"/> Changes in PDD	Section(s): C.2.2	New version No.: 3	<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:
<input checked="" type="checkbox"/> Changes in PDD	Section(s): C.2.2	New version No.: 3							
<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:							
DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<p>The starting date of the crediting period has now been revised to 26.02.2013. As any way the project is eligible to claim emission reductions only from the date of complete submission of documents to the EB, the proposed date is acceptable.</p> <p>CL C3 is closed.</p>								
Conclusion <i>Tick the appropriate checkbox</i>	<p><input type="checkbox"/> To be checked during the first periodic verification</p> <p><input type="checkbox"/> Additional action should be taken (finding remains open)</p> <p><input checked="" type="checkbox"/> The finding is closed</p>								

Finding	E1		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR

Finding	E1								
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<u>Under Section E.1:</u> <div><div>1. The local stakeholder consultation related documents have not been submitted for validation.</div><div>2. This section does not elaborate on how the comments relating to the proposed CDM project activity were invited in an open and transparent fashion by means of the local stakeholder consultation meet.</div><div>3. The last line of the 2nd paragraph under this section appears to be incomplete.</div></div> <u>Under Section E.3:</u> <div><div>1. The last line under this section appears to be irrelevant / or has not been explained clearly.</div></div> Associated checklist question(s): E.1.1 to E.1.2								
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	<div><div>1. The Stakeholder consultation related documents are being submitted.</div><div>2. The elaboration regarding transparency of stakeholders meet have now been made.</div><div>3. The last line of the 2nd paragraph under Section E1 has been completed.</div></div> <u>Under Section E3:</u> The last line has now been completed. <table><tr><td><input checked="" type="checkbox"/> Changes in PDD</td><td>Section(s): E.1 & E.3</td><td>New version No.: 2</td></tr><tr><td><input type="checkbox"/> Changes in XLS</td><td>Worksheet(s):</td><td>New version No.:</td></tr></table>			<input checked="" type="checkbox"/> Changes in PDD	Section(s): E.1 & E.3	New version No.: 2	<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:
<input checked="" type="checkbox"/> Changes in PDD	Section(s): E.1 & E.3	New version No.: 2							
<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:							
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<div><div>1. The Local Stakeholder consultation related supporting documents are yet to be submitted for validation-issue open.</div><div>2. Editorial correction has been undertaken to correct the last line of 2nd paragraph under Section E.1-issue closed.</div><div>3. Section E.1 does not elaborate on how the comments relating to the proposed CDM project activity were invited in an open and transparent fashion by means of the local stakeholder consultation meet-issue open.</div><div>4. Section E.2 of revised PDD version 2 is not as per the requirements of CDM-SSC-PDD filling guidelines-issue open.</div><div>5. In Section E.3, the irrelevant last sentence has now been removed-issue closed.</div><div>6. In Section E.3, the name of the PP has not been mentioned correctly using the full form-issue open.</div></div> CAR E1 is open.								

Finding	E1						
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	<p>1. The Local Stakeholder consultation related supporting documents are now being submitted.</p> <p>3. Section E.1 has been revised to include the date of publication of advertisement and how this was one week in advance of the meeting allowing invitation of comments in an open and transparent fashion.</p> <p>4. Section E.2 has been revised as per the guidelines for completing the project design document form for small-scale CDM projects.</p> <p>6. Section E.3 has been revised to refer the name of the PP as SMPCPL which is the abbreviation for Sai Maithili Power Company Private Limited, as stated in section A.1.</p> <table border="1"> <tr> <td><input checked="" type="checkbox"/> Changes in PDD</td><td>Section(s): E.1, E.2 & E.3</td><td>New version No.: 3</td></tr> <tr> <td><input type="checkbox"/> Changes in XLS</td><td>Worksheet(s):</td><td>New version No.:</td></tr> </table>	<input checked="" type="checkbox"/> Changes in PDD	Section(s): E.1, E.2 & E.3	New version No.: 3	<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:
<input checked="" type="checkbox"/> Changes in PDD	Section(s): E.1, E.2 & E.3	New version No.: 3					
<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:					
DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<p>1. The local stakeholder documentation have been submitted which include:</p> <ol style="list-style-type: none"> 1) Pictures of the local stakeholder meeting 2) Advertisement provided in 'Rajasthan Patrika' newspaper inviting stakeholders for the consultation meet 3) Stakeholder participation roll 4) Minutes of the local stakeholder consultation meeting 5) Local stakeholder consultation respondent forms. No adverse comments from the stakeholders were observed by the DOE from these forms. <p>2. The stakeholders had been given a week's notice to acquaint with the project details and to be present for the local stakeholder meeting. Further, the local stakeholders had been apprised about the project activity in detail. The revised /PDD/ version 3 now elaborately and transparently describes the local stakeholder consultation process. Thus, it is hereby assessed that the comments have been invited in an open and transparent manner.</p> <p>3. Section E.2 of the revised PDD version 3 has now been completed as per the CDM-SSC-PDD filling guidelines.</p> <p>4. The abbreviated form of the PP's name is now correctly mentioned in Section E.3.</p> <p>CAR E1 is closed.</p>						
Conclusion <i>Tick the appropriate checkbox</i>	<table border="1"> <tr> <td><input type="checkbox"/> To be checked during the first periodic verification</td></tr> <tr> <td><input type="checkbox"/> Additional action should be taken (finding remains open)</td></tr> <tr> <td><input checked="" type="checkbox"/> The finding is closed</td></tr> </table>	<input type="checkbox"/> To be checked during the first periodic verification	<input type="checkbox"/> Additional action should be taken (finding remains open)	<input checked="" type="checkbox"/> The finding is closed			
<input type="checkbox"/> To be checked during the first periodic verification							
<input type="checkbox"/> Additional action should be taken (finding remains open)							
<input checked="" type="checkbox"/> The finding is closed							

Finding	F1		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	1. The Host Country Approval(HCA) for the project activity has not been submitted. 2. The Modalities of Communication (MoC) for this project activity is yet to be submitted. Associated checklist question(s): F.1.1 to F.1.10/ F.2.1 to F.2.3		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	1. The Host Country Approval for the Project activity is awaited. 2. The MoC for The Modalities of Communication (MoC) for this project activity is being submitted.		
	<input type="checkbox"/> Changes in PDD	Section(s): Not applicable	New version No.:
	<input type="checkbox"/> Changes in XLS	Worksheet(s): Not applicable	New version No.:

Finding	F1
<p>DOE Assessment #1</p> <p><i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	<ul style="list-style-type: none"> • The submission of HCA is pending-issue open. • The MoC has been submitted-issue closed. • Sai Maithili Power Company Private Limited is mentioned both as the Sole Focal Point Authority for all scopes of authority as well as the Project Participant in Annex 1 of the MoC. This is consistent with the PDD submitted for registration. • The authorized signatories for the sole focal point entity are mentioned as Dr. B. Jagannatha Rao who is the primary authorised signatory and Mr. Niranjana Gopinathan who is the alternate authorised signatory. The specimen signatures for each signature has been provided. • Dr. B. Jagannatha Rao, an authorized signatory of the sole PP Sai Maithili Power Company Private Limited has duly signed the MoC Statement of Agreement. • The corporate identity of the sole Focal Point/Project Participant i.e., Sai Maithili Power Corporation Private Limited has been checked by the DOE by verifying various statutory clearances^{/SC/} submitted. Mainly, the Certificate of Incorporation issued by the Ministry of Corporate Affairs, Government of India under the Companies Act, 1956 dated 2007.08.27 has been submitted and verified. • Further, the Resolution^{/BD/} passed by the Board of Directors of Sai Maithili Power Company Private Limited authorizing Dr. B. Jagannatha Rao and Mr. Niranjana Gopinathan as the primary signatory and alternative signatory respectively, has been submitted and verified. Besides, at the time of the validation site visit^{/IMO1/} conducted from 2012.09.14 to 2012.09.15, the employment status, designations and specimen signatures of Dr. Rao and Mr. Gopinathan was verified first hand by the DOE. <p>Subsequent to the due diligence performed by this DOE on the submitted MoC statement, it is hereby concluded that submitted MoC complies with all relevant forms and all relevant requirements of the VVS, CDM Project Standard and the CDM Project Cycle Procedure. Thus, the details as mentioned in the MoC statement are assessed to be valid and accurate. Please also refer to Section 5.8.3 of this report below for a detailed assessment on the MoC.</p> <p>However, due to the pending submission of the HCA, CAR F1 is open.</p>
<p>Corrective Action #2</p> <p><i>This section shall be filled by</i></p>	<p>The Host Country Approval for the project activity dated 06/11/2012 with Ref. No. 4/16/2012-CCC is being submitted.</p>

Finding	F1		
<i>the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	<input type="checkbox"/> Changes in PDD	Section(s): Not applicable	New version No.:
	<input type="checkbox"/> Changes in XLS	Worksheet(s): Not applicable	New version No.:
<p>DOE Assessment #2</p> <p><i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	<p>The HCA for the project activity with reference no. 4/16/2012-CCC dated 06.11.2012 has been submitted.</p> <p>The Letter of Approval (LOA) i.e., the Host Country Approval (HCA) for this project activity has been received by the sole project participant Sai Maithili Power Company Private Limited from the sole host party involved i.e., India. The National CDM Authority, MoEF, GOI which is the Indian DNA has accorded HCA on the project activity vide ref no: 4/16/2012-CCC dated 2012.11.06. The HCA confers unconditional upon the project activity and confirms that:</p> <ul style="list-style-type: none"> • India is a party to the Kyoto Protocol • The participation in the project activity is voluntary • The project contributes to sustainable development in India • Refers to the precise project activity title as mentioned in the final version 4 of the PDD submitted for registration. <p>The HCA^{/HCA/} was sent to the DOE directly by the PP and is assessed to be authentic. The DNA of India maintains a publicly accessible database of approved projects (http://www.cdmindia.gov.in/) from which it was cross checked that the project had indeed been accorded the HCA and the issued HCA is authentic- issue closed</p> <p>However, the Project title as mentioned in the submitted MoC is inconsistent with the name as mentioned in the HCA-issue open</p> <p>CAR F1 is open.</p>		
<p>Corrective Action #3</p> <p><i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i></p>	<p>The Modalities of Communication Statement is being revised in order to have the title of the project activity consistent with that mentioned in the Host Country Approval.</p>		

Finding	F1
DOE Assessment #3 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<p>The project title is now made consistent between the MoC, the HCA and the PDD submitted for registration version 4.</p> <p>CAR F1 is closed.</p>
Conclusion <i>Tick the appropriate checkbox</i>	<p><input type="checkbox"/> To be checked during the first periodic verification</p> <p><input type="checkbox"/> Additional action should be taken (finding remains open)</p> <p><input checked="" type="checkbox"/> The finding is closed</p>

5 VALIDATION ASSESSMENT SUMMARY

5.1 General Description of the Project Activity

5.1.1 Technology to be employed

The project activity involves installation of 10 MW grid connected solar photovoltaic power plant at Gurha village, Kolayat Tehsil, Bikaner district in the state of Rajasthan. The project activity is under Jawaharlal Nehru National Solar Mission (JNNSM) with NTPC Vidyut Vyapar Nigam Limited (NVVN), for generation of 10 MW Solar Power on long term basis. The project is a Green field project activity and does not involve any alteration of the existing power plant. Prior to this project activity, project participant was not involved in solar PV based renewable power generation. Generated electricity from this project is supplied to NEWNE. Therefore, in the absence of the project activity, the equivalent amount of electricity would have been generated from the connected / new power plants in the NEWNE grid which are predominantly based on fossil fuels.

The technical details provided in the PDD were confirmed from the technical specifications^{/TECH/} provided by equipment supplier i.e. MiaSole^{/miasole/} technologies, California, USA. In confirming the details, the parameters with respect of the solar module type, number of module, semi conductor material details etc were also checked. The supplier agreement^{/PO/}, for supply of solar modules, was also cross checked. The inverter specification provided by Schneider electric is also checked from the technical details^{/TECH/}. Solar PV system includes different components that are selected according to system type, site location and applications. The major components for solar PV system are solar charge controller, inverter, battery bank, auxiliary energy sources and loads (appliances). The details of the components are given below:

- PV module – converts sunlight into DC electricity.
- Solar charge controller – regulates the voltage and current coming from the PV panels going to battery and prevents battery overcharging and prolongs the battery life.
- Inverter – converts DC output of PV panels into a clean AC current for AC appliances or fed back into grid line.
- Load – is electrical appliances that connected to solar PV system such as lights, radio, TV, computer, refrigerator, etc.

The photovoltaic system mainly consists of PV modules, module mounting structures, inverters, regulators, monitoring devices etc. The proposed project activity will implement array of thin film modules. The output from LV Panel is stepped up by outdoor type transformers located near the control room. The HV side of transformer is connected to HT Panel in the control room. The LV and HT Panels have all necessary metering and protection as per Power evacuation schematic. The project activity would generate electricity from solar energy and export to the NEWNE grid. Therefore, the project activity will generate emission reductions by avoiding CO₂ emissions from electricity generation through fossil fuel based grid connected power plants.

Solar photovoltaic system or solar power system is one of renewable energy system which uses PV modules to convert sunlight into electricity. The electricity generated can be stored

or used directly, fed back into grid line or combined with one or more other electricity generators or more renewable energy source. Solar PV system is very reliable and clean source of electricity that can suit a wide range of applications such as residence, industry, agriculture, livestock, etc.

The Direct Current (DC) from modules is converted into Alternating Current (AC) by inverters. The inverter outputs are fed into a junction box which in turn is connected to the LV Panel in the control room. The output from LV Panel is stepped up by outdoor type transformers located near the control room. The HV side of transformer is connected to HT Panel in the control room. The power generation from Solar PV is a clean technology as there are no GHG emissions associated with it. Technology is indigenous, available within the country, and environmentally safe and sound.

CAR A2 had been issued pertinent to this section and closed out following successful resolution.

5.1.2 Small Scale Projects

As per Annex II to Decision 4/CMP.1, the candidate project activity involves solar power based renewable generation resorting to Solar Photovoltaic (PV) thin-film technology and the capacity of the project activity is 10 MW^{/JNNSM/} which is less than the maximum qualifying capacity limit of 15 MW for a small scale CDM project activity. Thus, it falls under the Type I project activities of Annex II to Decision 4/CMP.1. Further, this capacity will not increase throughout the whole crediting period of 10 years. Consequently, the project is eligible to use the simplified modalities and procedures for small scale CDM project activities. Thus, the candidate project has appropriately applied the latest approved⁵ small scale methodology AMS ID^{/AMSID/} version 17-Grid connected renewable electricity generation which is valid from 2011.06.17 onwards. The project has also applied the latest applicable valid version⁶ of the methodological tool “Tool to calculate the emission factor for an electricity system” version 2.2.1 valid from 2011.09.29 onwards.

As per “Guidelines on the assessment of de-bundling for SSC project activities”, it has been verified that:

There is no registered small-scale CDM project activity or an application to register another small-scale CDM project activity:

- (a) With the same project participants;
- (b) In the same project category and technology/measure; and
- (c) Registered within the previous 2 years; and
- (d) Whose project boundary is within 1 km of the project boundary of the proposed small-scale activity at the closest point.

Thus, it is hereby concluded that the proposed CDM project is a small scale project activity entitled to apply simplified modalities and procedures. Further, it is also hereby concluded that the project is not a de-bundled component of a larger project activity.

CAR A3 had been issued pertinent to this section and closed out following successful resolution.

⁵ <http://cdm.unfccc.int/methodologies/DB/RSCTZ8SKT4F7N1CFDXCSA7BDQ7FU1X>

⁶ http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v2.2.1.pdf/history_view

5.2 Project Baseline

5.2.1 Application of the Methodology

The project applies approved baseline and monitoring methodology “Grid connected renewable electricity generation”; Version 17 (<http://cdm.unfccc.int/methodologies/DB/RSCTZ8SKT4F7N1CFDXCSA7BDQ7FU1X>). The applied methodology is identical to the version available to the UNFCCC website. All the applicability criteria for the project activity are defined in section B.2 of the PDD which is assessed to be correct by the assessment team during the validation site visit. The project is in line with all the other stipulated requirement of the methodology. The emission due to project and the baseline emission is covered under the stipulated project. The project correctly applies reference of tool, which the approved consolidated methodology AMS.I.D draws upon. “Tool to calculate the emission factor for an electricity system”; Version: 2.2.1” which is the latest version at the time of submitting the PDD to the DOE for validation. Further, baseline emission factor is calculated as combined margin, consisting of a combination of operating margin (OM) and build margin (BM) factors according to the procedure prescribed in the “Tool to calculate the emission factor for an electricity system” version 2.2.1 which is sourced from CEA version 07^{/CEA/}, Govt. of India and forms the part of emission reduction calculation. The CEA database version 07 was the latest applicable version at the time of submission of the PDD to the DOE for validation. All applicability conditions of the methodology have been met. An assessment of applicability criteria may be referred to from Annex 2 below.

CAR B1 had been issued pertinent to this section and closed out following successful resolution.

5.2.2 Project Boundary

AMS I.D^{/AMSID/} version 17 specifies that project boundary encompasses the physical, geographical site of the renewable generation source. The Project boundary includes “the project power plant and all power plants connected physically to the electricity system that the CDM project power plant is connected to”.

During the site visit and interview with the project personnel^{/IM01/} it was found that the project is a Greenfield activity with any of the project equipment yet to be in place. However, the purchase order^{/PO/} for supply of solar modules have been verified. Further, the signed PPA^{/PPA/} has also been checked as the total energy generated by the project activity is proposed to be sold to NVVN. The state of Rajasthan is covered under NEWNE grid. The PP has provided a depiction of the project boundary in the PDD^{/PDD/} final version 4 submitted for registration which is found to be appropriate. All the applicable GHG gases are included in the baseline and project emission and the same is in compliance with the applied methodology.

As the generated power will be fed to state grid which is connected to the Integrated Northern, Eastern, Western, and North-Eastern (NEWNE) grid, therefore NEWNE grid has

been chosen as electricity distribution system for the baseline calculations which was checked during the site visit and subsequent interview with the PP^{/IM01/} and found correct. All the applicable GHG gases are included in the baseline and the same is in compliance with the applied methodology^{/AMSID/}.

CAR B2 had been issued pertinent to this section and closed out following successful resolution.

5.2.3 Baseline Identification

The applied methodology, AMS ID^{/AMSID/} version 17 prescribes the baseline scenario as “The baseline scenario is that 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 project activity is part of the NEWNE grid, a Combined Margin emission factor for the NEWNE grid has been calculated utilizing the publicly available, credible and authentic CEA^{/CEA/} database⁷ version 7 which was applicable at the time of web hosting the PDD and the “Tool^{/EFTOOL/} to calculate emission factor for an electricity system” version 2.2.1⁸. The combined margin emission factor for the NEWNE grid is calculated to be 0.9528 tCO_{2e} / MWh^{/ER/}.

Calculation of grid emission factor:

Option (a) has been considered to calculate the grid emission factor. It has been calculated as per the version 2.2.1 of ‘Tool to calculate the emission factor for an electricity system’^{/EFTOOL/}.

- The calculation of the operating margin emission factor (EF_{grid,OM}) is based on simple operating margin procedure and the approach is found as per the applied Tool
- Option 1 as described above is chosen for the project activity. BM is calculated ex-ante based on the most recent information 2010-11 available at the time of submission of PDD and it will be fixed ex ante for the entire crediting period.
- The Combined margin is calculated based on the derived value of build margin(25% * 0.8588) and operating margin (75%*0.9842) .

Determination of PLF for the proposed project:

As per EB48 Annex11 requirements, the PP had commissioned AIC^{/PLF/} projects to determine the PLF for the proposed CDM project activity. As per the report submitted by AIC projects dated 2012.07.27, the PLF value was determined to be 21.46%. However, as the PPA for the project has already been signed by the PP with NVVN, as per clause 4.4.1 of the PPA agreement, NVVN is not obliged to purchase beyond 18.396 Million Units in any year of generation which corresponds to a PLF value of 21%. Thus, as a conservative approach, the PLF value of 21% has been adopted for the purpose of baseline emission estimation.

Calculation of net electricity exported by the project activity to the grid:

Based upon the plant capacity of 10 MW and the PLF value of 21%, the gross electricity generation by the project activity is 18.396 GWh during the first and second year of generation. Thereafter a de-rating factor of 0.5% per year has been applied as per the

⁷ http://www.cea.nic.in/reports/planning/cdm_co2/cdm_co2.htm

⁸ http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v2.2.1.pdf/history_view

Rajasthan Electricity Regulatory Commission Tariff order^{/RERC/} dated 2012.05.30. Further, an auxiliary consumption of 0.25% per year is also accounted for according to the same RERC regulations. Therefore, the net electricity exported by the project activity to the grid is 18.350 GWh during the first two years of operation and an average of 18.020 GWh for the duration of ten years of the project activity.

Determination of baseline emissions:

As per AMS ID version 17, "The baseline emissions are the product of electrical energy baseline $EG_{BL, y}$ expressed in MWh of electricity produced by the renewable generating unit multiplied by the grid emission factor."

Therefore, the baseline emissions are determined to be an average of 17,169 tCO_{2e} / annum over the lifetime of the project activity. Thus the process of establishing baseline is assessed to be correct and in line with applied methodology and applied tool.

CAR B4, CAR B5 and CAR B6 had been issued pertinent to this section and closed out following successful resolution.

5.2.4 Algorithms and formulae used to determine emission reductions

As per AMS ID Version 17, Emission reductions are calculated as follows:

$ER_y = BE_y - PE_y - LE_y$ Where:

ER_y = Emission reductions in year y (t CO₂/y)

Baseline Emission (BE_y):

$BE_y = EGBL_{y} * EF_{CO_2, grid, y}$

Where

BE_y = Baseline Emissions in year y; (tCO₂)

$EGBL_{y}$ = Quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in year y (MWh)

$EF_{CO_2, grid, y}$ = Grid emission factor for the project activity in year y (tCO₂/MWh)

BE_y = Baseline Emissions in year y (t CO₂/y)

Project Emission (PE_y):

PE_y = Project emissions in year y (t CO₂/y)

As per the applied methodology AMS ID version 17:

Paragraph 20, for most renewable energy generation projects, project emissions are Zero

Leakage (LE_y):

LE_y = Leakage emissions in year y (t CO₂/y)

As per the applied methodology AMS ID version 17:

Paragraph 22, no equipment has been transferred from another activity. The candidate project is a Greenfield activity and hence leakage has not been considered.

Thus, the emission reductions due to the project activity $ER_y = BE_y$.

The combined margin emission factor for the NEWNE grid is calculated to be 0.9528 tCO_{2e} / MWh^{ER/}. All the emission reduction calculations have been done as per applied methodology AMS ID version 17. The Emission Reductions sheet^{ER/} has been submitted for validation which also includes the Grid Emission Factor calculation work sheet. The data not to be monitored i.e., grid emission factor which is determined ex-ante and remains fixed over the entire fixed crediting period of ten years has been correctly and conservatively determined. The grid emission factor has been calculated from the CEA database version 7^{CEA/} which was applicable at the time of submission of the PDD for validation. The GEF factor has been calculated using the latest version 2.2.1 of the Tool to calculate the emission factor for an electricity system. Thus, the data sources and assumptions for the ex-ante fixed parameters are appropriate and the corresponding calculations are correct and applicable to the project activity. Further, the value for the sole monitoring parameter i.e., the net electricity exported to the grid in a year is 18.350 GWh for the first two years and an average of 18.020 GWh over the crediting period of the project activity. This is based on a PLF value of 21% and based on the threshold limit set by the PPA for purchase of power from the project activity. Beyond the first two years, a de-rating factor of 0.5% is applied as per the provisions of RERC tariff order dated 2012.05.30 which is assessed to be conservative and appropriate. Further, an auxiliary consumption of 0.25% is also considered from the same RERC tariff order.

Thus, the estimated annual average emission reductions of 17,169 tCO_{2e} and the overall emission reductions of 171,686 tCO_{2e} over the fixed crediting period of ten years are assessed to be plausible and conservative. The determined ex-ante emission reductions provide a real, verifiable estimate and provide long term benefits in the action against global climate change.

CAR B4, CAR B5, CAR B6 and CAR B7 had been issued pertinent to this section and closed out following successful resolution.

5.3 Additionality Determination

5.3.1 Consideration of CDM in decision making (if project start before validation)

The start date of the project activity is reckoned as 2012.06.29 which is the date on which supplier agreement^{PO/} was signed with MiaSole by the PP for supply of Solar PV thin film modules. This is the date on which the PP has committed to the first and significant expenditure with respect to the proposed CDM Solar PV project activity. During the validation

site visit conducted during 2012.09.14 to 2012.09.15, documents verification and interview with project personnel was undertaken. It was found that the PP had issued a work order dated 2011.12.13 for conducting topographical survey of the proposed site near Gurha village, Kolayat Tehsil, Bikaner district of Rajasthan and also for site levelling works. However, it was felt by the DOE that conducting a topographical survey of the proposed site and undertaking levelling of the land does not directly pertain to the proposed CDM project. Thus, the subsequent chronological milestones were examined. The Power Purchase Agreement^{PPA/} for the project activity had been signed by the PP with NVVN on 2012.01.27. However, the PPA was revocable with respect to non-fulfilment of conditions by the PP, as mentioned in clauses 3.1 and 3.2.1 of the PPA, prior to 2012.08.27 by which date the PDD was already web hosted⁹ by the DOE. Thus, it was observed that the supplier agreement dated 2012.06.29 was the first important chronological milestone pertaining directly to the proposed CDM project activity which is irrevocable and which also leads the PP to a significant project-related expenditure. Thus, in accordance with the definition of “Start date of the project activity” as per the latest version of the CDM Glossary of Terms^{GLOSS/}, the start date of the project activity is reckoned as 2012.06.29. The DOE concludes that there is no date prior to 2012.06.29 which can reasonably be considered as the Project activity Start Date. Besides, even if the date on which the topographical survey was conducted (2011.12.13) or the date of signing of PPA agreement (2012.01.27) is considered as the start date, this does not have any impact on the CDM prior consideration intimation (2012.04.16) as these dates fall within the six months period as per the CDM prior consideration guidelines. Thus, the consideration of 2012.06.29 as the start date of the project activity is assessed to be appropriate.

The start date of 2012.06.29 is prior to the commencement of validation and is subsequent to 2008.08.02 as per clause 7 of the CDM Project Cycle Procedure. Accordingly, the PP has notified^{pCDM/} the National CDM Authority, Ministry of Environment and Forests, Government of India which is the DNA and also the UNFCCC Secretariat in writing on 2012.04.16. The email copies of the intimations have been submitted for validation. Further, acknowledgements of these intimations were sent back to the PP from the DNA on 2012.08.28 and from the UNFCCC Secretariat on 2012.04.17. The email acknowledgement copies have also been submitted. Besides, the DOE has checked the UNFCCC CDM Prior Consideration notification page and observed¹⁰ that the intimation regarding the proposed project activity had been displayed. Besides, the Board of Directors of Sai Maithili Power Company Private Limited during their meeting on 2012.04.28 had also deliberated^{BD/} CDM benefits in proceeding with the proposed project activity.

It is therefore concluded that the PP has demonstrated due prior consideration of CDM.

CAR B3 had been issued pertinent to this section and closed out following successful resolution.

Application of methodology / methodological tools

The capacity of the project is 10 MW (less than 15 MW) and hence it is considered as a small scale project activity. Therefore, in accordance with § 28 of the simplified modalities and procedures for small-scale CDM project activities, the additionality of the project activity

⁹ <https://cdm.unfccc.int/Projects/Validation/DB/9WDHQYI6CWLON5Z734VGI8XU7PQXA7/view.html>

¹⁰ <https://cdm.unfccc.int/Projects/PriorCDM/notifications/index.html>

has been demonstrated using EB 68 Annex 27 (version 9), Guidelines on the demonstration of additionality of small-scale Project activities. As all requirements specified vide § 28 of the simplified modalities and procedures are complied with by the project activity, this approach has been assessed to be appropriate for the additionality assessment for this project activity. As per EB 68 Annex 27 (version 9), “Guidelines on the demonstration of additionality of small-scale Project activities” Para 2, documentation of barriers is not required for the positive list of technologies and project activity types that are defined as automatically additional for project sizes up to and including the small-scale CDM thresholds (e.g. installed capacity up to 15 MW). The positive list comprises of:

(a) The following grid-connected and off-grid renewable electricity generation technologies that are automatically defined as additional, without further documentation of barriers, consists of the following grid-connected renewable electricity generation technologies of installed capacity up to 15 MW:

- i. Solar technologies (photovoltaic and solar thermal electricity generation);*
- ii. Off-shore wind technologies;*
- iii. Marine technologies (wave, tidal)*
- iv. Building-integrated wind turbines or household rooftop wind turbines of a size up to 100 kW;*

During the site visit and subsequent document review, assessment team found that the project activity involves installation of 10 MW grid connected solar photovoltaic power plant. The capacity of the project activity is checked with the solar module supply agreement^{/PO/} and Power Purchase Agreements^{/PPA/}, which specify that the capacity of the project activity is 10 MW. Thus the assessment team confirms that the capacity of the project is 10 MW.

Since the capacity of the project activity is well within the stipulated limit of EB 68 Annex 27 (version 9) (15MW), and the project is connected to NEWNE grid of India the project is deemed additional by default, without the need for any further analysis.

5.3.2 Alternatives

The candidate project applies approved small scale methodology AMS ID^{/AMSID/} version 17 which prescribes the baseline. As per paragraph 115 of the VVS, the prescription of baseline scenario by the applied methodology pre-empts the need for identification of other plausible baseline alternatives. Thus, the identified baseline is credible and complete.

5.3.3 Investment analysis

The candidate project activity employs Solar PV thin-film technology for renewable energy generation. Thus, as per EB 68 Annex 27 (version 9) the candidate project activity falls under a positive list of automatically “deemed additional” projects. In this context, the performance of Investment Analysis by the PP to demonstrate additionality of the project has been deemed redundant by the DOE.

5.3.4 Barrier analysis

The candidate project activity employs Solar PV thin-film technology for renewable energy generation. The project activity is small scale 10 MW solar project activity which confirms to EB 68 Annex 27 (version 9) and is default additional; hence common practice analysis demonstration is not required. Thus, the candidate project activity falls under a positive list of automatically “deemed additional” projects. In this context, the demonstration of barriers experienced by the project activity has been deemed redundant by the DOE.

5.3.5 Common practice analysis

The project activity is small scale solar project activity which confirms to EB 68 Annex 27 (version 9) and is default additional. The candidate project is small scale and thus is exempt from performing/demonstrating common practice analysis.

5.4 Monitoring Plan

The monitoring plan of the PDD follows the approved monitoring methodology AMS.I.D^{/AMSID/} version 17. As per AMS ID version 17, the sole monitoring parameter is the “net electricity supplied to the grid by the project activity in any given year.” The grid emission factor is determined ex-ante and remains fixed throughout the fixed crediting period of ten years. The parameters monitored ex-post involves net electricity supplied to the NEWNE grid by the project activity and the same is used in emission reduction calculations. The grid electricity export and import is monitored by a pair of main and back up ABT meters installed at the interconnection point i.e. the substation at Kolayat. Net electricity exported by the project activity to the grid would then be calculated by the PP and the representative of the state electricity utility and recorded in Joint Metering Reading sheets.. The backup meter serves as an alternative in case of failure of the main meter. For purposes of billing for net electricity exported by the project to the grid, Joint Meter Readings^{/JMR/} are taken by the State Electricity Utility officials every month in JMR sheets in the presence of a representative of the PP. Based upon the JMR readings, invoices would be raised by the PP to the state electricity utility. The readings would be measured continuously and recorded at least once in a month by way of JMR statements.

The calibration of the meter will be carried out once in a three year. As per the signed PPA^{/PPA/}, calibration is required at least once in five years. Thus applying a conservative approach PP is doing calibration once in a three year which is deemed appropriate by the validation team. Further, the PP has constituted CDM management architecture under the overall supervision of the Director who leads a team headed by a Project Head. At the time of validation site visit^{/IM01/} from 2012.09.14 to 2012.09.15, interview with project proponent and personnel was conducted during which time the validation team assessed the proposed CDM management structure and monitoring plan and found it to be sound and appropriate. The PP also undertakes to sufficiently train the O&M personnel involved in day to day operations and also to safely keep records for at least two years beyond the crediting period.

Post commissioning of the project, the net electricity exported from the project activity is calculated based on the electricity export and import provided in the monthly Joint meter reading reports. The readings from the JMR reports are in-turn cross-checked with the sales

receipt raised by the PP to the respective state electricity utility. This was confirmed based on the document review^{/PPA/TECH/}, and therefore the assessment team concludes that monitoring of the project activity is correct and appropriate.

It is therefore concluded that:

The monitoring plan covers all monitoring parameters given in the applied monitoring methodology and all parameters which have to be monitored with respect to the project boundary

The monitoring plan be implemented and all monitoring arrangements are feasible within the project design

The means of implementation of the monitoring plan, including data management and quality assurance and quality control procedures are sufficient to ensure that the Emission Reductions to be achieved by the project activity can be properly reported and verified.

CAR B8 had been issued pertinent to this section and closed out following successful resolution.

5.5 Crediting Period

The PP has chosen a fixed crediting period of ten years. The starting date of the first crediting period is chosen as 2013.02.26 which is the proposed date of commissioning of the project activity. The choice of the crediting period is unambiguously provided in the PDD. Further, the crediting period start date is also assessed to be appropriate.

CAR C1, CL C2 and CL C3 had been issued pertinent to this section and closed out following successful resolution.

5.6 Environmental Impacts

The candidate project activity involves solar power based renewable energy generation. Solar energy is a clean source of energy and does not lead to any GHG emissions. Solar power projects do not fall under the category of projects requiring environmental clearance as per the EIA^{/eia/} notification, 2006 as amended in 2009. The EIA notification has been checked by the DOE. Further, the Ministry of Environment and Forests, Government of India has specifically exempted Solar PV based projects from EIA/environmental clearance vide notification^{/EIA/} dated 2011.05.13.

Thus, it is hereby concluded that there are no environmental impacts due to the proposed CDM project activity. Further, the HCA conferred by the host country India on the candidate project states that the project contributes to sustainable development in the host country India.

5.7 Comments by Local Stakeholders

A local stakeholder consultation was conducted by the Project Participant on 2012.08.08 at the project site near Gurha village, Tehsil Kolayat, District Bikaner, Rajasthan state of India, which is prior to making the PDD publicly available (2012.08.15 to 2012.09.13) so as to receive global stakeholder feedback/comments. The local stakeholder consultation related documents^{/LSC/} viz., pictures of the stake holder meet, newspaper advertisement in

“Rajasthan Patrika” newspaper dated 2012.08.01 inviting stakeholders for participation in the stakeholder meeting, pamphlets containing the project description, minutes of meeting of the stakeholder meeting, participant attendance register and questionnaire feedback forms have been presented to the DOE for validation.

The PP had placed an advertisement dated 2012.08.01 in the “Rajasthan Patrika” newspaper intimating the conduct of local stakeholder meeting so as to reach a cross-sectional population of local stakeholders in an open and transparent manner. This process of inviting has thus facilitated participation of a well-diversified and cross-sectional stakeholder population in the local stakeholder consultation meeting. Thus, the invitation of stakeholders for the meeting had been done in an open and transparent manner.

Further, on the day of the local stakeholder meet, the local stakeholders gathering was apprised about the proposed CDM project activity and were provided opportunities to raise questions pertaining to the project. In addition, the participants were also provided with feedback forms to provide their responses about the understanding of the project activity. The Sections E.1, E.2 and E.3 of the PDD have been completed in conformity with the PDD filling guideline^{/PDD-G/}. It is the DOE’s opinion that the stakeholders had been invited in an open and transparent to participate in the local stakeholder consultation meeting held on 2012.08.08. The local stakeholders were provided with adequate project related information and sufficient time so as to enable them to provide comments, if any. However, based upon perusal of the documentation, it is observed that there are no negative comments raised which have to be taken into consideration by the PP. The summary of comments has been provided in the PDD. Further, during the validation site visit conducted from 2012.09.14 to 2012.09.15, interview^{/IM03/} with a few local stakeholders who participated in the local stakeholder meeting was undertaken and thereby their participation in the meeting and understanding of the project activity was assessed first hand by the DOE. The participation of stakeholders is adequately representative of the local stakeholders in the project vicinity. In summary, the DOE assesses the local stakeholder consultation meeting to be adequate.

CAR E1 had been issued in this regard and closed out following successful resolution.

5.8 Participation

5.8.1 Project Participants

Sai Maithili Power Company Private Limited (SMPCPL) is the sole project participant involved in this project activity. SMPCPL has a direct contractual relationship^{/CRR/} with TÜV Nord, the validating DOE. The name of the PP is consistent in Section A.4 of the PDD as well as in Appendix 1. The CDM Prior consideration page^{/unfccc/} has also been checked for the consistency in name of the PP. Further, the Host Country Approval ref no: 4/16/2012-CCC dated 2012.11.06 conferred on the project activity by the sole host party involved i.e., India also mentions the name of the PP in a consistent manner as provided in the PDD.

5.8.2 LOA

The Letter of Approval (LOA) i.e., the Host Country Approval (HCA) for this project activity has been received by the sole project participant Sai Maithili Power Company Private Limited from the sole host party involved i.e., India. The National CDM Authority, MoEF, GOI which is

the Indian DNA has accorded HCA on the project activity vide ref no: 4/16/2012-CCC dated 2012.11.06. The HCA confers unconditional upon the project activity and confirms that:

- India is a party to the Kyoto Protocol
- The participation in the project activity is voluntary
- The project contributes to sustainable development in India
- Refers to the precise project activity title as mentioned in the final version 4 of the PDD submitted for registration.

The HCA ^{/HCA/} was sent to the DOE directly by the PP and is assessed to be authentic. The DNA of India maintains a publicly accessible database¹¹ of approved projects from which it was cross checked that the project had indeed been accorded the HCA and the issued HCA is authentic.

CAR F1 had been issued pertinent to this section and closed out following successful resolution.

5.8.3 MoC

Following the directions of the CDM Project Cycle Procedure paragraphs 23-34, the PP has duly completed the MoC^{/MoC/} by filling in the latest applicable valid version 02.1 of the F-CDM-MOC form¹² along with its Annex 1.

Further, complying with paragraph 72 of the CDM Project Standard:

- The title of the proposed project activity has been mentioned in the MoC statement. This title is cross checked with the title of the project as mentioned in the Host Country Approval^{/HCA/} ref no. 4/16/2012-CCC dated 2012.11.06 and is found to be consistent.
- The date of submission of MoC statement to this DOE has been mentioned as 2012.12.18
- Sai Maithili Power Company Private Limited is mentioned both as the Sole Focal Point Authority for all scopes of authority as well as the Project Participant in Annex 1 of the MoC. The address of the Focal Point Authority/PP has been mentioned which is valid and was verified by the DOE at the time of validation site visit^{/IM01/}. The authorized signatories for the sole focal point entity are mentioned as Dr. B. Jagannatha Rao who is the primary authorised signatory and Mr. Niranjan Gopinathan who is the alternate authorised signatory. The specimen signatures for each signature has been provided.
- The sole PP i.e., Sai Maithili Power Company Private Limited along with its contact details and specimen signature of its authorized signatories (same as that of the authorized signatories under focal point entity) have been provided.
- Dr. B. Jagannatha Rao, an authorized signatory of the sole PP Sai Maithili Power Company Private Limited has duly signed the MoC Statement of Agreement.

The corporate identity of the sole Focal Point/Project Participant, i.e., Sai Maithili Power Corporation Private Limited has been checked by the DOE, by verifying various statutory clearances^{/SC/} submitted. Mainly, the Certificate of Incorporation issued by the Ministry of Corporate Affairs, Government of India under the Companies Act, 1956 dated 2007.08.27 has been submitted and verified. Further, the Resolution^{/BD/} passed by the Board of Directors of Sai Maithili Power Company Private Limited authorizing Dr. B. Jagannatha Rao and Mr.

¹¹ http://www.cdmindia.gov.in/approved_projects.php

¹² http://cdm.unfccc.int/Reference/PDDs_Forms/Registration/reg_form19.pdf

Niranjan Gopinathan as the primary signatory and alternative signatory respectively, has been submitted and verified. Besides, at the time of the validation site visit^{/IM01/} conducted from 2012.09.14 to 2012.09.15, the employment status, designations and specimen signatures of Dr. Rao and Mr. Gopinathan was verified first hand by the DOE. Further, TÜV Nord has a direct contractual relationship^{/CRR/} with Sai Maithili Power Company Private Limited. The signatures of the authorized signatories are internally consistent between the F-CDM-MOC form and its Annex 1. The completed MoC form has been sent by Dr. Rao directly to the DOE.

Subsequent to the due diligence performed by this DOE on the submitted MoC statement, it is hereby concluded that submitted MoC complies with all relevant forms and all relevant requirements of the VVS, CDM Project Standard and the CDM Project Cycle Procedure. Thus, the details as mentioned in the MoC statement is assessed to be valid and accurate.

Pertaining to this, CAR F1 was raised and closed out following successful resolution.

5.9 PDD editorial Aspects

The PP has completed the latest applicable version¹³ of the CDM-SSC-PDD form^{/PDD-T/}. The PDD has been completed following the latest applicable version¹⁴ of the CDM-SSC-PDD filling guidelines^{/PDD-G/}.

CAR A1, CAR A2, CAR A3, CAR B1, CAR B2, CAR B3, CAR B9, CAR C1, CAR E1 and CAR F1 had been issued pertinent to this section and closed out following successful resolution.

¹³ http://cdm.unfccc.int/Reference/PDDs_Forms/PDDs/PDD_form07.pdf

¹⁴ http://cdm.unfccc.int/Reference/Guidclarif/pdd/PDD_guid07.pdf

6 VALIDATION OPINION

Sai Maithili Power Company Private Limited has commissioned the TÜV NORD JI/CDM Certification Program (CP) to validate the project: “Grid connected solar photovoltaic power plant in Bikaner, Rajasthan, India” with regard to the relevant requirements of the UNFCCC for CDM project activities, as well as criteria for consistent project operations, monitoring and reporting. UNFCCC criteria include article 12 of the Kyoto Protocol, the modalities and procedures for CDM (Marrakech Accords) and the relevant decisions by COP/MOP and CDM Executive Board

In the course of the pre-validation 14 Corrective Action Requests (CARs) and 3 Clarification Requests (CLs) were raised and successfully closed.

The review of the project design documentation^{/PDD/ER/} and additional documents related to baseline and monitoring methodology^{/AMSID/CEA/}, the subsequent background investigation^{/PO/miasole/TECH/PPA/SC/BD/JNNSM/PLF/EIACLAR/}, follow-up interviews^{/IM01/IM02/IM03/} and review of comments by parties, stakeholders and NGOs have provided TÜV NORD JI/CDM CP with sufficient evidence to validate the fulfilment of the stated criteria.

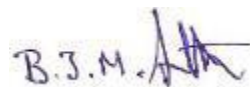
In detail the conclusions can be summarised as follows:

- The project is in line with all relevant host country criteria (India) and all relevant UNFCCC requirements for CDM. Further the project activity is in compliance with the requirements set up by the applied approved CDM methodology AMS I.D ver.17 Project activity approval have been obtained from DNA of India vide the Host Country Approval (HCA) reference no. 4/16/2012-CCC dated 06.11.2012.
- The project is additional as per provisions of EB68 Annex 27 Version 09 “Guidelines on the demonstration of additionality of small scale project activities” paragraph 2..
- The monitoring plan is transparent and adequate.
- The calculation of the project emission reductions is carried out in a transparent and conservative manner, so that the calculated emission reductions of 171,686 t CO_{2e} are most likely to be achieved within the fixed crediting period of ten years.

The conclusions of this report show, that the project, as it was described in the project documentation, is in line with all criteria applicable for the validation.

Chennai, 2012.12.24

Essen, 2012.12.24



BJM Amarnath, Team Leader
TÜV NORD JI/CDM CP
Validation Team Leader



Rainer Winter
TÜV NORD JI/CDM CP
Final Approval

7 REFERENCES

Table 7-1: Documents provided by the project participant

Reference	Document
/BD/	Certified copy of resolution passed by the Board of Directors of Sai Maithili Power Company Private Limited on 2012.04.28 considering CDM benefits for the economic viability of authorizing personnel to oversee the implementation of the proposed 10 MW solar PV project.
/CLAR/	Clarification on capacity of the grid connected Solar PV power projects under JNNISM Batch II, Phase-I issued by NVVN
/EIA/	Exemption under EIA notification, 2006 for Environment Impact Assessment / Environmental clearance pertaining to solar PV power projects, notification issued by Ministry of Environment and Forests, Government of India dated 2011.05.13
/ER/	<ul style="list-style-type: none"> Emission reduction calculation spreadsheet version 1 corresponding to Draft PDD version 1 Emission reduction calculation spreadsheet version 2 corresponding to PDD version 2 Final Emission reduction calculation spreadsheet version 3 corresponding to Final PDD version 3 Final Emission reduction calculation spreadsheet version 4 corresponding to Final PDD version 4
/HCA/	Host Country Approval from the DNA of India Ref No: 4/16/2012-CCC dated 06.11.2012.
/LSC/	<p>Local Stakeholder consultation process related documents / evidences:</p> <ul style="list-style-type: none"> Pictures from the Local stakeholder consultation meeting conducted on 2012.08.08 Minutes of Meeting of the local stakeholder consultation meeting conducted on 2012.08.08 Advertisement in Hindi language placed in 'Rajasthan Patrika' newspaper dated 2012.08.01 inviting stakeholders for the local stakeholder consultation meeting to be held on 2012.08.08 Notarized English-translated copy of the newspaper advertisement Stakeholder Consultation-respondent forms Local stakeholder participation roll and signed attendance register
/MOCMoC/	Modalities of Communication Statement (F-CDM-MOC MoC and Annex 1) version 02.1 for the project dated 2012.10.12.15178

Reference	Document
/pCDM/	<ul style="list-style-type: none"> • Prior Consideration of CDM Intimation email message copy dated 2012.04.16 sent by the PP to the UNFCCC • Acknowledgement of Prior Consideration of CDM Intimation copy of email message sent by UNFCCC to the PP dated 2012.04.17 • Prior Consideration of CDM Intimation email message copy dated 2012.04.16 sent by the PP to the National CDM Authority, Ministry of Environment and Forests, Government of India • Acknowledgement of Prior Consideration of CDM Intimation copy of email message sent by MOEF to the PP dated 2012.08.28
/PDD/	<ul style="list-style-type: none"> • Draft Project Design Document version 1 named "Grid connected solar photovoltaic power plant in Bikaner, Rajasthan, India" hosted from 2012.08.15 to 2012.09.13 • Revised PDD version 2 dated 2012.10.15 • Final Revised PDD version 3 dated 2012.11.16 • Final PDD version 4 dated 2012.12.19
/PDD-T/	Project Design Document Form (F-CDM_PDD) – Version 04.0
/PLF/	<p>Report from simulation study conducted by KSK Surya Photovoltaic Venture Private Limited dated 2011.09.27</p> <p>Report on "Yield Assessment of 10 MW PV Power Plant" undertaken by AIC Projects-a third-party engineering consultant- for client Sai Maithili Power Company Private Limited dated 2012.07.27</p>
/PO/	Sales agreement for supply of Thin-Film Photovoltaic Modules dated 2012.06.29 between Sai Maithili Power Company Private Limited and MiaSole, California, USA.
/PPA/	<ul style="list-style-type: none"> • Power purchase Agreement reference no: NVVN/Solar-NP/Batch II/ PV/11-12/ 549, for procurement of 10 MW solar power on long term basis between Sai Maithili Power Company Private Limited and NTPC Vidyut Vyapar Nigam Limited (NVVN) dated 2012.01.27 • Amendment No.1 made to the /PO/ dated 2012.10.30 • Annexure -3 -PPA model copy available on the NVVN website.
/SC/	<p>Statutory Clearance related documents:</p> <ul style="list-style-type: none"> • Certification of Incorporation under the Companies Act, 1956 issued to Sai Maithili Power Company Private Limited dated 2007.08.27 by the Assistant Registrar of Companies, Andhra Pradesh • Registration Certificate issued to M/s Sai Maithili Power Company Private Limited by the Commercial Taxes Officer, Bikaner under the Rajasthan VAT Act, 2003 bearing registration number TIN:08191362037 dated 2012.02.22

Reference	Document
/TECH/	Technical specifications of the MiaSole MS Series-02 solar panel thin film module

Table 7-2: Background investigation and assessment documents

Reference	Document
/AMSID/	AMS I.D ver.17: Grid connected renewable electricity generation
/CEA/	Central Electricity Authority CO ₂ emission factor database version 7
/CLAR/	Clarification on capacity of the grid connected Solar PV power projects under JNNSM Batch II, Phase-I issued by NVVN
/CPM/	TÜV NORD JI / CDM CP Manual (incl. CP procedures and forms)
/CPM/	TÜV NORD JI / CDM CP Manual (incl. CP procedures and forms)
/CRR/	Contract Review Report between the PP and TUV Nord dated 2012.06.30
/DVR/	Draft Validation Report dated 2012.09.21
/EB68 Annex27/	Guidelines for the demonstration of additionality for small scale CDM project activities, Version 9
/EFTOOL/	Tool for the calculation of Emission Factor for an electricity system version 2.2.1
/GCP/	UNFCCC: Guidelines for completing the Project Design Document Form , (v. 01.0)
/IPCC/	<ul style="list-style-type: none"> IPCC Good Practice Guidance & Uncertainty Management in National Greenhouse Gas Inventories, 2000 Revised 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Reference Manual
/JNNSM/	Jawaharlal Nehru National Solar Mission document of Government of India
/KP/	Kyoto Protocol (1997)

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Reference	Document
/MA/	Decision 3/CMP. 1 (Marrakesh – Accords & Annex to decision (17/CP.7))
/PDD-G/	UNFCCC: Guidelines for completing the Project Design Document Form , (v. 01.0, EB66 Annex9)
/VVS/	Validation and Verification Standard (Version 03.0, EB 70, Annex 3)
Reference	Document

Table 7-3: Websites used

Reference	Link	Organisation
/dna/	http://www.cdmindia.gov.in/	National CDM Authority, MoEF, GOI
/eia/	http://envfor.nic.in/	Ministry of Environment and Forests, Government of India.
/cea/	http://www.cea.nic.in/	Central Electricity Authority
/rerc/	http://www.rerc.rajasthan.gov.in/	Rajasthan Electricity Regulatory Commission
/cerc/	http://www.cercind.gov.in/	Central Electricity Regulatory Commission, Government of India
/mnre/	http://www.mnre.gov.in/	Ministry of New and Renewable Energy, Government of India
/miasole/	http://www.miasole.com/	Miasole Technologies-Solar PV thin film manufacturers
/nvvn/	http://www.nvvn.co.in/	National Vidyut Vyapar Nigam Limited
/cd4cdm/	www.cd4cdm.org	UNEP Riso Centre
/ipcc/	www.ipcc-nggip.iges.or.jp	IPCC publications
/unfccc/	http://cdm.unfccc.int	UNFCCC

Table 7-4: List of interviewed persons

Reference	Mol ¹		Name	Organisation / Function
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Dr. B Jagannatha Rao	Senior GM, SMPCL
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	K Krishnan	Senior Manager-Projects, SMPCL
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Venkata Karthik Gudi	AGM, SMPCL

Reference	Mol ¹		Name	Organisation / Function
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	NVRC Balabhaskar	Senior GM, SMPCPL
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	MH Sudarshankumar	Civil Department, SMPCPL
/IM02/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Srinath Komarina	Asst Manager, KPMG
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Bagha Ram	Local stakeholder, Gurha village
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Lala Ram	Local stakeholder, Gurha village
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Ram Dayal	Local stakeholder, Gurha village
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Gukha Ram	Local stakeholder, Gurha village

¹⁾ Means of Interview: (Telephone, E-Mail, Visit)

ANNEX

- A1:** Validation Protocol
- A2:** Assessment of Applicability
Criteria
- A3:** Assessment of Baseline
Identification
- A4:** Assessment of Financial
Parameters
- A5:** Assessment of Barrier analysis
- A6:** Outcome of the GSCP
- A7:** Statement of competence of
involved Personnel

ANNEX 1: VALIDATION PROTOCOL

Table A-1: Requirements Checklist

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
A. General Description of Project Activity				
A.1. Technology to be employed <i>Validation of project technology focuses on the project engineering, choice of technology and competence/maintenance needs. The DOE should ensure that environmentally safe and sound technology and know-how is used.</i>				
A.1.1. Does the PDD contain a clear, accurate and complete project description? (VVS, v. 2.0, §§ 64, 69) <i>The PDD shall contain a clear description of the project activity which provides the reader with a clear understanding of the precise nature of the project activity and the technical aspects of its implementation.</i> <i>Pl. consider esp. chapters A.1, A.3 (in case of LSC PDD) for assessment.</i> <i>§69 (a) Describe the process undertaken to validate the</i>	/PDD/ /TECH/ /IM01/ /IM02/	<u>Description:</u> <u>Under Section A.3:</u> 1. The sectoral scope and type of the project activity has not been provided. Related to this, the project scale and type has also not been explicitly described. 2. In the last paragraph, though it is claimed that the technology for the project is procured from World's well known manufacturers, it is further contradicted that there is no technology transfer associated with the project activity.	CAR A2	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<p><i>accuracy and completeness of the project description.</i></p> <p><i>§69 (b) Contain the DOE's opinion on the accuracy and completeness of the project description.</i></p>		<p><i>Validator's action:</i></p> <ul style="list-style-type: none"> A validation site visit along with interview of project proponent, project personnel and project consultant was undertaken on 14.09.2012 and 15.09.2012. The equipment specifications were verified during the validation site visit. <p><i>Conclusion:</i></p> <p>The closure of CAR A2 is pending.</p>		
<p>A.1.2. Is this description in accordance with the real situation or (in case of greenfield projects) is it most likely that the project will be implemented acc to the project description?</p>	<p>/PDD/ /TECH/ /SC/ /PO/ /IM01/ /IM02/</p>	<p><i>Description:</i></p> <p>The project is a Greenfield project activity.</p> <p><i>Validator's action:</i></p> <p>A validation site visit along with interview of project proponent, project personnel and project consultant was undertaken on 14.09.2012 and 15.09.2012.</p> <p><i>Conclusion:</i></p> <p>The project is a Greenfield project activity. The actual implementation of the project activity is likely to be in accordance with the project description as mentioned in the PDD.</p>	OK	OK
<p>A.1.3. In case the project involves alteration of the existing installation or process, is a clear description available regarding the differences between the project and the pre-project situation?</p>	<p>/PDD/ /TECH/ /SC/ /PO/</p>	<p><i>Description:</i></p> <p>The project is a Greenfield project activity.</p> <p><i>Validator's action:</i></p> <p>A validation site visit along with interview of project proponent, project</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
(VVS, v. 2.0, § 68) <i>Describe the steps taken to validate this issue.</i>	/IM01/ /IM02/	personnel and project consultant was undertaken on 14.09.2012 and 15.09.2012. <i>Conclusion:</i> Based upon validation site visit, interview with project proponent, project personnel and project consultant followed by documents verification, it is hereby concluded that the project is a Greenfield project activity.		
A.2. Small scale project activity <i>It is assessed whether the project qualifies as small-scale CDM project activity</i>				
A.2.1. Does the project fall within the small scale project activity threshold and applies a large-scale approved methodology? In this case, are the modalities and procedures for large-scale project activities followed? (VVS, v. 2.0, § 151)	/PDD/ /TECH/ /PO/ /AMS ID/	<i>Description:</i> <u>Under Section A.3:</u> The sectoral scope and type of the project activity has not been provided. Related to this, the project scale and type has also not been explicitly described. <i>Validator's action:</i> The submitted draft version of the PDD has been examined. <i>Conclusion:</i> <i>The closure of CAR A2 is pending.</i>	CAR A2	OK
In case of project activities applying a LSC-Methodology, go to B.1				
A.2.2. Does the project qualify as a small scale CDM project activity as defined in decision 4 /	/PDD/ /TECH/	<i>Description:</i> <u>Under Section A.3:</u>	CAR A2	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<p>CMP.1 annex II?</p> <p>(VVS, v. 2.0., §§ 150–152)</p> <p><i>Please indicate whether the project activity meets the eligibility criteria for small scale-projects. Specially consider whether the project qualifies within the thresholds of the three possible types of small-scale project activities</i></p>	<p>/PO/ /AMS ID/</p>	<p>The sectoral scope and type of the project activity has not been provided. Related to this, the project scale and type has also not been explicitly described.</p> <p><i>Validator's action:</i></p> <p>The submitted draft version of the PDD has been examined.</p> <p><i>Conclusion:</i></p> <p><i>The closure of CAR A2 is pending.</i></p>		
<p>A.2.3. Does the project apply one of the approved small scale categories and any methodology and tool referred therein?</p> <p>(VVS, v. 2.0., § 152 (b))</p> <p><i>Check, if applicable the expiry dates of the applied methodology. Further, take into consideration the general guidance to the methodologies¹⁵, which provide guidance on equipment capacity, equipment performance, sampling and other monitoring related issues.</i></p>	<p>/PDD/ /AMS ID/ /EFTO OL/ /unfccc/</p>	<p><i>Description:</i></p> <p>The project applies approved small category AMS ID version 17 valid from 17.06.2011 onwards. Further, it also makes use of Tool to calculate emission factor for an electricity system version 2.2.1 valid from 29.09.2011 onwards.</p> <p><i>Validator's action:</i></p> <p>The following web links have been checked:</p> <p>http://cdm.unfccc.int/filestorage/V/9/L/V9LRSXKP24Q7YT6HZDUBO3C0ING8AJ.1/EB61_repan17_Revision_AMS-I.D_ver17.pdf?t=Uzl8bWFvdjFhfDBu3fi8CBZN3qNTEBYoLJRS</p> <p>http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v2.2.1.pdf</p> <p><i>Conclusion:</i></p> <p>It is hereby concluded that the project applies approved small scale methodology AMS ID version 17 and also a valid version of the</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
		methodological tool: Tool to calculate emission factor for an electricity system version 2.2.1		
<p>A.2.4. Is the small scale project activity not a debundled component of a larger project activity?</p> <p>(VVS, v. 2.0, §§ 154-157)</p> <p><i>Describe the steps taken to assess whether the project activity is not a debundled component of a large scale activity, in accordance to the "Guidelines on assessment of debundling for SSC project activities".</i></p>		<p><i>Description:</i></p> <p><u>Under Section A.6:</u></p> <p>The de-bundling requirements have not been demonstrated with reference to the Project Standard as required by the CDM-SSC-PDD filling guidelines.</p> <p><i>Validator's action:</i></p> <p>A validation site visit along with interview of project proponent, project personnel and project consultant was undertaken on 14.09.2012 and 15.09.2012.</p> <p>There is no registered small scale CDM project activity or a request for registration by another small-scale project activity:</p> <ul style="list-style-type: none"> • By the same project participants; • In the same project category and technology/measure; • Registered within the previous two years; and • Whose project boundary is within 1 km of the project boundary of the proposed small-scale activity at the closest point. <p><i>Conclusion:</i></p> <p>The closure of CAR A3 is pending.</p>	CAR A3	OK
B. Project Baseline, Additionality and Monitoring Plan				

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
B.1. Reference of the Methodology				
B.1.1. Does the PDD correctly quote an applicable version of the methodology? (VVS, v. 2.0, § 74)	/PDD/ /AMS ID/ /unfccc /	<input checked="" type="checkbox"/> The applied methodology is correctly quoted and is identical to the version available on the UNFCCC website. <input checked="" type="checkbox"/> The applied version of the baseline and monitoring methodology is applicable and valid at the time of submission for stakeholder consultation.	OK	-
B.2. Applicability of the Methodology				
B.2.1. Does the project apply an approved and applicable CDM methodology and a valid version thereof? (VVS, v. 2.0, §§ 70, 74, 76, 77) <i>Describe the steps taken to validate this issue.</i> <i>Describe for each applicability criterion listed in the selected approved methodology the steps taken to assess its fulfilment</i>	/PDD/ /AMS ID/ /unfccc /	<input checked="" type="checkbox"/> The applied methodology is correctly quoted and is identical to the version available on the UNFCCC Website. <input checked="" type="checkbox"/> The applied version of the baseline and monitoring methodology is valid at the time of submission for stakeholder consultation. <input type="checkbox"/> All applicability criteria in the methodology, the applied tools or any other methodology component referred to therein are fulfilled (please make detailed assessment in Annex 2 of this protocol).	CAR B1	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<p>B.2.2. In case one or more applicability criteria have not been met, has the validation team requested clarification to, revision of or deviation from the methodology in accordance with the latest guidelines?</p> <p>(VVS, v. 2.0., §§ 78-81)</p>	/PDD/ /AMS ID/	<p><i>Description:</i></p> <p>No situation was encountered by the DOE which would cause to request clarification to, revision of or deviation from the applicable methodology AMS ID version 17.</p> <p><i>Validator's action:</i></p> <ul style="list-style-type: none"> • The draft /PDD/ has been examined • The applicable version 17 of AMS ID has been consulted. • A validation site visit was undertaken on 14.09.2012 and 15.09.2012 <p><i>Conclusion:</i></p> <p><i>The closure of CAR B1 is pending.</i></p>	CAR B1	OK
<p>B.3. Project Boundaries</p> <p><i>Project Boundaries are the limits and borders defining the GHG emission reduction project</i></p>				
<p>B.3.1. Are the project's spatial boundaries (geographical) clearly defined?</p> <p>(VVS, v. 2.0, §§ 72 (a), 82)</p> <p><i>Provide information on how the validation of the geographical boundary has been performed either based on reviewed documented evidence or by describing what was observed/viewed during a site visit.</i></p>	/AMS ID/ /PDD/ /IM01/ /IM02/	<p><i>Description:</i></p> <p><u>Under Section B.3:</u></p> <ol style="list-style-type: none"> 1. The project boundary has not been defined strictly as per the definition of AMS ID version 17 2. The pictorial depiction of the project boundary as required by the CDM-SSC-PDD filling guidelines is absent. <p><i>Validator's action:</i></p> <ul style="list-style-type: none"> • The draft /PDD/ has been examined 	CAR B2	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
		<ul style="list-style-type: none"> The applicable version 17 of AMS ID has been consulted. A validation site visit was undertaken on 14.09.2012 and 15.09.2012 <p><i>Conclusion:</i> The closure of CAR B2 is pending.</p>		
<p>B.3.2. Are all sources and GHGs included in the project boundary as required in the applied methodology?</p> <p>(VVS, v. 2.0, §§ 82, 84)</p> <p><i>Provide information on how the validation of the GHGs and sources has been performed either based on reviewed documented evidence or by describing what was observed/viewed during a site visit.</i></p>	<p>/AMS ID/ /PDD/ /PO/ /TECH/ /SC/</p>	<p><i>Description:</i> The project is a solar photovoltaic based renewable energy generation plant which involves no GHG emissions and it is also not a source of GHGs.</p> <p><i>Validator's action:</i> A validation site visit was undertaken on 14.09.2012 and 15.09.2012 which encompassed interviews with project personnel and document verification.</p> <p><i>Conclusion:</i> The candidate project activity is a renewable energy generation project activity and involves no emission sources or any other GHG emission sources.</p>	OK	-
<p>B.3.3. In case the methodology allows to choose whether a source and/or gas is to be included, is the choice sufficiently explained and justified?</p> <p>(VVS, v. 2.0, §§ 84, 87)</p> <p><i>Confirm if the Adequacy provided by the PPs is reasonable, based on assessment of supporting documented evidence</i></p>		<i>Please refer to B.3.2</i>		

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<i>provided by the PPs or by onsite observations.</i>				
<p>B.3.4. Have emission sources been identified, which are expected to contribute more than 1% of the overall expected average annual emissions reductions and which are not addressed by the selected approved methodology?</p> <p>(VVS, v. 2.0, § 87)</p> <p><i>Describe the steps taken to validate this issue. If any emission sources that are expected to contribute more than 1% have been identified, the DOE shall request clarification of, revision to, or deviation from the methodology, as appropriate.</i></p>	<p>/AMS ID/ /PDD/</p>	<p><i>The candidate project is a solar photovoltaic based renewable energy generation, which does not involve any emission sources and it does produce any GHG emissions. The applied methodology AMS ID version 17 sufficiently covers all emission sources pertaining to this kind of project activity.</i></p> <p><i>Please refer to B.3.2</i></p>	OK	OK
<p>B.4. Baseline Identification</p> <p><i>The choice of the baseline scenario will be validated with focus on whether the baseline is a likely scenario, and whether the methodology to define the baseline scenario has been followed in a complete and transparent manner.</i></p>				
<p>B.4.1. Has the baseline scenario been determined according to the methodology?</p> <p>(VVS, v. 2.0, §§ 72 (b), 89, 87(e))</p> <p><i>Describe how it is validated that the identification of the most plausible baseline scenario is carried out in accordance with</i></p>	<p>/AMS ID/ /PDD/</p>	<p><input checked="" type="checkbox"/> The baseline is defined by the applying methodology and the PDD refers to it. If the answer is Yes, continue to B.4.5</p> <p><input type="checkbox"/> The baseline is not directly defined by the applying</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<i>the applied methodology and applied methodological tools. Please refer to table A-2.</i>		methodology. For details of the assessment regarding the evaluation of the baseline scenario pl. refer to table A-2. <input type="checkbox"/> The determination has been carried out as per the procedure contained in the applied methodology. <input type="checkbox"/> The following CARs / CLs have been identified with respect to the selection of the baseline scenario:		
B.4.2. Is the list of alternatives complete? (VVS, v. 2.0, § 90) <i>Describe how it was validated that all alternatives are plausible and that any scenarios that are supplementary to those required by the methodology are realistic and credible in the context of the project activity and that no alternative scenarios have been excluded.</i> <i>Fill in all alternatives in table A-2.</i>	NA	<input type="checkbox"/> All plausible alternative scenarios listed in the approved methodology have been considered. In the course of document review and site visit, it has been validated that no other alternatives which supply comparable outputs and / or services are to be taken into consideration. Thus no plausible scenario has been excluded. <input type="checkbox"/> The following alternative scenarios/options have been omitted. Corresponding CAR(s)/CL(s) has /have been issued	NA	NA
B.4.3. Is the identified baseline scenario reasonable and has the baseline scenario been determined using conservative assumptions where possible, including relevant references and sources? (VVS, v. 2.0, § 91) <i>Describe whether the choice of the identified baseline scenario is reasonable by validating the <u>key assumptions, calculations and rationales</u> used in the PDD. Describe</i>	NA	<input type="checkbox"/> The baseline scenario is reasonable and has been determined using conservative assumptions where possible. Please refer to comments in table A-2.. <input type="checkbox"/> The following CARs / CLs have been issued because assumptions used in the baseline determination have been assessed to be not conservative	NA	NA

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<i>whether these are listed, relevant and <u>conservatively interpreted</u> in the PDD.</i>				
<p>B.4.4. Does the baseline scenario sufficiently take into account relevant national and/or sectoral policies such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector.?</p> <p>(VVS, v. 2.0, § 93)</p> <p><i>Describe whether the PP has shown that all relevant policies and circumstances have been identified and correctly considered in the PDD. Two (2) types of national and/or sectoral policies have to be taken into account:</i></p> <p><i>(a) National and/or sectoral policies or regulations that give comparative advantages to more emissions-intensive technologies or fuels over less emissions-intensive technologies or fuels, known as E+ policiesa. For this type of national and/or sectoral policies or regulations, only those that have been implemented before adoption of the Kyoto Protocol by the COP (decision 1/CP.3, 11 December 1997) shall be taken into account</i></p> <p><i>(b) National and/or sectoral policies or regulations that give comparative advantages to less emissions-intensive technologies over more emissions-intensive technologies (e.g. public subsidies to promote the diffusion of renewable energy or to finance energy efficiency programmes), known as E- policies. For this type of national and/or sectoral policies or regulations, those that have been implemented</i></p>	NA	Not applicable. Please refer to B.4.1	NA	NA

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<i>since the adoption by the COP of the CDM M&P (decision 17/CP.7, 11 November 2001) need not be taken into account in identifying a baseline scenario.</i>				
B.4.5. What has been identified as the baseline scenario? Does the PDD contain a <i>verifiable</i> description of the identified baseline scenario, including a description of the technology that would be employed and/or the activities that would take place in the absence of the proposed CDM project activity?. (VVS, v. 2.0, § 88)	/AMS ID/ /PDD/	<p><i>Description:</i></p> <p>The applied methodology AMS ID version 17 prescribes the baseline scenario.</p> <p><i>Validator's action:</i></p> <p>The methodology AMS ID version 17 and the VVS have been consulted.</p> <p><i>Conclusion:</i></p> <p>The PDD contains a verifiable description of the baseline scenario as per the applied methodology AMS ID version 17.</p>	OK	-
B.5. Additionality Determination <i>The assessment of additionality will be validated with focus on whether the project itself is not a likely baseline scenario.</i>				
B.5.1. Methodology				
B.5.1.1. Does the PDD describe how the	/PDD/	The proposed solar photovoltaic based renewable energy generation	-	-

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<p>project is additional and does the additionality justification follow the requirements of the applied methodology and/or methodological tools?</p> <p>(VVS, v. 2.0, §§ 72 (d), 101-102)</p> <p><i>Describe how it is validated that additionality justification is carried out in accordance with the applied methodology and/or applied methodological tools. Further focus your assessment on the reliability and credibility of data, rationales and assumptions, justifications and documentations provided by the PP.</i></p>	/EB63A nnex24/	CDM project activity is exempt from demonstrating additionality as it is deemed additional under clause 2(a) of EB 63 Annex 24.		
B.5.2. Consideration of CDM before project start				
<p>B.5.2.1. In case the project start date is on or after 2nd August 2008 has the PP informed the DNA and UNFCCC about the intention to seek CDM status?</p> <p>(VVS, v. 2.0, § 107, EB 62, Annex 13, § 5)</p> <p><i>Describe whether such a notification has been provided by the project participants within 180 days to the UNFCCC and host Party DNA and that further notifications, if necessary (two years from CDM Prior Notification letter without having published the PDD), have been sent to the UNFCCC. If NOT it shall be determined that the CDM was not seriously considered.</i></p> <p><i>Assess the project starting date in section C.1</i></p>	/PS/ /unfccc/ /PO/ /dna/	<p><u>Description:</u> <u>Under Section B.5:</u></p> <ol style="list-style-type: none"> 1. The description of Prior Consideration of CDM refers to an obsolete guideline requirement 2. A description on how the start date of the project activity has been determined has not been provided. Thus, the prior consideration of CDM demonstration under this section is not transparent. <p><u>Validator's action:</u></p> <p>The draft /PDD/ has been checked in this regard</p> <p>The UNFCCC prior consideration notification page has been checked.</p> <p>During the validation site visit on 14.09.2012 and 15.09.2012, interview with project proponent was undertaken.</p>	CAR B3	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
		<i>Conclusion:</i> <i>Closure of CAR B3 is pending.</i>		
In case the project starting date has been correctly defined on or after 2 nd August 2008, go to B.5.2.4				
<p>B.5.2.2. In case the project start date is before commencing of validation and 2nd August 2008, was the incentive from the CDM seriously considered by the project participants and the benefits of CDM were considered a decisive factor in the decision to proceed with the project?</p> <p>(VVS, v. 2.0, § 108 (a)) <i>Describe whether the evidences to support such considerations are adequately and transparently described in the PDD.</i></p> <p><i>Include an assessment on how was the CDM involved in the decision making process, as well as how and when the decision to proceed with the project activity was taken and whether the decision to proceed with the project was taken by a person which has the authority to do so.</i></p> <p><i>Include an assessment of the authenticity of the evidences.</i></p>		<p><i>Description:</i> N/A</p> <p><i>Validator's action:</i></p> <p><i>Conclusion:</i></p>	N/A	N/A
<p>B.5.2.3. Does the documented evidence provided doubtlessly prove that continuous and real actions were taken in order to secure the CDM status?</p>		<p><i>Description:</i> N/A</p> <p><i>Validator's action:</i></p>	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<p>(VVS, v. 2.0, §§ 108;(b), 109, 110)</p> <p><i>Include an assessment on the gap between the documented evidences to secure the CDM status.</i></p> <p><i>When the gap is greater than two years and less than three, it has to be assessed whether continuing and real actions were taken to secure CDM status for the project activity.</i></p> <p><i>If the gap is greater than three years, it must be concluded that continuing and real actions were not taken to secure CDM status for the project activity).</i></p> <p><i>Describe the steps taken to validate that the real documented evidences are reliable and authentic.</i></p>		Conclusion:		
<p>B.5.2.4. Does the proposed project activity comply with all applicable requirements related to the prior consideration of the CDM?</p> <p>(VVS, v. 2.0, § 112(c))</p> <p><i>Describe whether or not the project would have been undertaken without the incentive of the CDM.</i></p>		Please refer to B.5.2.1		
<p>B.5.3. Identification of alternatives Step 1</p> <p>(in case of SSC projects pl. skip steps 1 and 2 if appropriate; in cases where the baseline scenario is prescribed in the approved methodology, skip step 1, (VVS, v. 2.0, § 115))</p>				
<p>B.5.3.1. Does the list of alternatives contain the status-quo situation, the project not</p>	/AMS ID/	The applicable methodology AMS ID version 17 prescribes the baseline scenario and thus precludes the identification of other baseline alternatives.	-	-

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<p>undertaken as a CDM project as well as all other viable alternatives for supplying the outputs or services that are to be supplied by the proposed CDM project activity? Do all identified alternatives comply with enforced legislations?</p> <p>(VVS, v. 2.0, §§ 114, 116)</p> <p><i>Describe whether the list of alternatives is credible and complete. Describe how it is validated that the list of alternatives is complete, realistic and that the alternatives are credible and that all alternatives comply with the existing and enforced legislation.</i></p> <p><i>Describe the steps taken to validate this issue on the basis of your local and sectoral knowledge.</i></p>	/PDD/			
<p>B.5.4. Investment analysis Step 2</p> <p><i>In case the investment analysis as per step 2 is chosen to justify the additionality Annex 4 "Assessment of Financial Parameters" has to be used to provide additional details of the calculation parameters..</i></p>				
<p>B.5.4.1. Does the PDD provide evidence that the project would not be the most economically or financially attractive alternative or economically / financially feasible without the revenues from the sale of CERs?</p> <p>(VVS, v. 2.0, § 117)</p>	<p>/PDD/ /EB63A nnex24/</p>	<p>The proposed solar photovoltaic based renewable energy generation CDM project activity is exempt from demonstrating additionality as it is deemed additional under clause 2(a) of EB 63 Annex 24.</p>	-	-

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<i>In cases where the project activity would produce no financial or economic benefits other than CDM-related income, describe how it has been validated that at least one of the alternatives identified is less costly than the proposed project activity.</i>				
<p>B.5.4.2. Is a clear, viewable and unprotected Excel spreadsheet available for the investment calculation?</p> <p>(EB 62 Annex 5 , §8)</p> <p><i>Describe the steps taken to validate this issue.</i></p>		<p><input type="checkbox"/> Yes, a clear, viewable and unprotected Excel spreadsheet is available.</p> <p><input type="checkbox"/> No, a respective Excel spreadsheet needs to be made available for investment calculation.</p> <p>The proposed solar photovoltaic based renewable energy generation CDM project activity is exempt from demonstrating additionality as it is deemed additional under clause 2(a) of EB 63 Annex 24.</p>	NA	NA
<p>B.5.4.3. Does the period chosen for the investment analysis reflect the technical lifetime of the project activity or in case a shorter period is chosen, is the fair value of the project activity's assets at the end of the investment analysis period (as a cash inflow) included?</p> <p>(EB 62 Annex 5 § 3)</p> <p><i>Describe how the technical lifetime / period chosen for calculating financial parameter(s) is reviewed and which documents were utilised in the course of review. Describe furthermore the approach used to check the inclusion of a potential fair value.</i></p>	NA	<i>Not applicable. Please refer to B.5.4.1</i>	NA	NA
B.5.4.4. Is the fair value calculated in	NA	<i>Not applicable. Please refer to B.5.4.1</i>	NA	NA

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<p>accordance with local accounting regulations (where available) or international best practice?</p> <p>(EB 62 Annex 5, § 4)</p> <p><i>State the accounting regulations applied for calculating the fair value and describe why these are applicable under the project specific circumstances. Describe potential mismatches between regulations and the approach applied for calculating the fair value.</i></p>				
<p>B.5.4.5. Is the book value as well as the expectation of the potential profit or loss included in the fair value calculation?</p> <p>(EB 62 Annex 5, § 4)</p>	NA	Not applicable. Please refer to B.5.4.1	NA	NA
<p>B.5.4.6. Is an appropriate analysis method chosen for the project (simple cost analysis, investment comparison analysis or benchmark analysis)?</p> <p>(EB 65 Annex 21, EB 62, Annex 5, §19)</p> <p><i>Describe why the selected analysis method is appropriate under consideration of potential revenues and costs, potential project alternatives and potential available benchmark values.</i></p> <p><i>Assess whether the alternative to the project activity is to supply the same or substitute products or services. In this case, an investment comparison analysis shall be used.</i></p>	NA	Not applicable. Please refer to B.5.4.1	NA	NA

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<p>B.5.4.7. Were the input values used in the investment analysis valid and applicable at the time of the investment decision?</p> <p>(EB 62 Annex 5, § 6) <i>Describe the steps taken to validate this issue</i></p>	NA	<i>Not applicable. Please refer to B.5.4.1</i>	NA	NA
<p>B.5.4.8. Did implementation of the project ceased after its commencement and did implementation recommence after consideration of the CDM?</p> <p>(EB 62 Annex 5, § 7) <i>Describe the reasons for ceasing the project and explain why the incentive from CDM was necessary to recommence the implementation.</i></p> <p><i>Assess whether the investment analysis reflects the economic decision-making context at point of the decision to recommence the project, i.e. capital costs incurred prior to the recommencement of the project are to be limited to the potential reuse/resale of tangible assets, demonstrating the value through assessment done by chartered specialists.</i></p>	NA	<i>Not applicable. Please refer to B.5.4.1</i>	NA	NA
<p>B.5.4.9. Are the input parameters based on values from Feasibility Study Reports that are approved by national authorities for proposed project activities?</p> <p>(VVS, v. 2.0, § 122) <i>In case the basis for input values is a Feasibility Study Report</i></p>	NA	<i>Not applicable. Please refer to B.5.4.1</i>	NA	NA

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<i>(FSR) describe how it has been ensured that the period in time between the finalisation of the FSR and the investment decision is sufficiently short so that it is unlikely that input values would have materially changed. Further confirm the consistency of values in FSR and PDD.</i>				
In case a simple cost analysis has been done, go to B.5.5;				
B.5.4.10. Has been a suitable financial indicator chosen by the project participants? (VVS, v. 2.0, § 120 (a)) <i>Describe the steps taken to validate this issue.</i>	NA	<i>Not applicable. Please refer to B.5.4.1</i>	NA	NA
B.5.4.11. Are depreciation and other non-cash related items only considered in the tax calculation and not as cash outflow? (EB 62 Annex 5, § 5)	NA	<i>Not applicable. Please refer to B.5.4.1</i>	NA	NA
B.5.4.12. Is the plant load factor (PLF) chosen in a conservative manner, taking into account that the PLF may be different in the framework of demonstrating additionality and calculating the ex-ante ER? (EB 48, Annex 11)	/EB48A nnex11/ /PDD/	<i>Description:</i> The value for the CUF utilized in the ER computations is unsupported. Further, how this value meets the requirements of EB 48 Annex 11 is also unclear. <i>Validator's action:</i> The submitted draft version of the /PDD/ has been examined. <i>Conclusion:</i>	CAR B7	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
		<i>Closure of CAR B7 is pending.</i>		
<p>B.5.4.13. Does the PDD and related spreadsheets contain a sensitivity analysis and does the same contain variation of parameters which may vary throughout the project lifetime,</p> <p>(EB 62 Annex 5, § 20-21)</p> <p><i>Describe relevance of parameters used in the sensitivity analysis as well as their likeliness to vary during the project's lifetime. Parameters which are fixed on the basis of contracts, PPAs etc. may not be subject to variation and not adequate.</i></p>	NA	<i>Not applicable. Please refer to B.5.4.1</i>	NA	NA
<p>B.5.4.14. Were only variables that constitute more than 20% of either total project costs or total project revenues subjected to reasonable variation?</p> <p>(EB 62 Annex 5, § 20)</p>	NA	<i>Not applicable. Please refer to B.5.4.1</i>	NA	NA
<p>B.5.4.15. Have parameters, constituting less than 20% of total project costs or revenues, been identified with potential material impact on the financial parameter?</p> <p>(EB 62 Annex 5, § 20)</p> <p><i>Describe whether those parameters are considered in the sensitivity analysis?</i></p>	NA	<i>Not applicable. Please refer to B.5.4.1</i>	NA	NA
<p>B.5.4.16. Is the range of variation reasonable in</p>	NA	<i>Not applicable. Please refer to B.5.4.1</i>	NA	NA

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
the specific context of the project activity, taking into consideration historic trends in the business sector? (EB 62 Annex 5, § 21) <i>Describe whether the range of variation is appropriate with focus on historic developments, e.g. price of oil / labour etc., energy potential in the region in question.</i>				
B.5.4.17. In case of project IRR: Are the costs of financing expenditures (loan repayments and interests) excluded from the calculation of project IRR? (EB 62 Annex 5, § 9)	NA	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Yes, the costs of financing expenditures have been included. <input type="checkbox"/> No, this requirement is not met. In this context the following additional findings have been identified:	NA	NA
B.5.4.18. In case of equity IRR: Is the part of the investment costs, which is financed by equity, considered as net cash outflow and is the part financed by debt excluded in net cash outflow? (EB 62 Annex 5, § 10)	NA	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Yes, in- and outflows have been considered correctly. <input type="checkbox"/> No, this requirement is not met. In this context the following additional findings have been identified:	NA	NA
In case a comparison analysis has been done, go to B.5.5				
B.5.4.19. Is the type of benchmark chosen appropriate for the type of IRR calculated	NA	Not applicable. Please refer to B.5.4.1	NA	NA

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
(e.g. local commercial lending rates or weighted average costs of capital for project IRR; required/expected returns on equity for equity IRR)? (EB 62 Annex 5, §12) <i>Describe the steps taken to validate this issue.</i>				
B.5.4.20. Is a pre-tax benchmark applied in case of project IRR is calculated? In cases where a post-tax benchmark is applied, assess whether actual interest payable is taken into account in the calculation of income tax. (EB 62 Annex 5, § 11) <i>If this is not the case, ensure that taxation is excluded from the investment analysis. As per the guidance it is recommended to select a pre tax benchmark in order to describe the steps taken in assessing this requirement.</i>	NA	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> A pre-tax benchmark is applied <input type="checkbox"/> The benchmark is post-tax and the interest has been taken into account for the calculation <input type="checkbox"/> No, this requirement is not met. In this context the following additional findings have been identified:	NA	NA
B.5.4.21. Have both benchmark and cash flows expressed consistently, i.e. real terms (excluding the effect of inflation) or nominal terms? <i>Describe the steps taken to validate this issue.</i>	NA	<i>Not applicable. Please refer to B.5.4.1</i>	NA	NA
B.5.4.22. Is the benchmark value suitable for the project activity and is it reasonable to	NA	<i>Not applicable. Please refer to B.5.4.1</i>	NA	NA

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<p>assume that no investment would be made at a rate of a lower return than the benchmark?</p> <p>(VVS, v. 2.0, § 121 (c)) <i>Describe whether it is reasonable to assume that a lower rate of return would consequently result in the baseline scenario.</i></p>				
<p>B.5.4.23. Is the benchmark applied based on parameters that are available and standard in the market?</p> <p>(VVS, v. 2.0, 121 (b), EB 62 Annex 5, §§13, 15, 16, 18) <i>Assess whether company-specific benchmarks or benchmarks based on parameters that are available in the market are suitable to the project activity. A benchmark that includes the subjective profitability expectations or risk profile of the project developer (size risk premiums, company own risk premium, etc) is not suitable for project activities open to be developed by other entities.</i></p> <p><i>If cost of equity is applied, assure that best financial practices are used and are based on data sources which can be cross-checked against third-party or publicly available sources.</i></p> <p><i>If cost of debt is used for the calculation of the benchmark, ensure that it is calculated as the cost of financing in the capital markets (e.g: commercial lending rates)</i></p> <p><i>If the cost/equity financing structure of the project is not yet available, 50% equity, 50% debt financing may be assumed as default.</i></p>	NA	Not applicable. Please refer to B.5.4.1	NA	NA
Following checklist is intended for cases where intern company benchmarks are applied, otherwise go to				

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
B.5.5				
<p>B.5.4.24. Is it ensured that the project cannot be developed by other developers than the PP, so that internal company benchmarks or expected returns are suitable for the project activity?</p> <p>(EB 62 Annex 5, §§ 13 – 14) <i>Describe how it has been validated that there is only one possible project developer.</i></p>	NA	<i>Not applicable. Please refer to B.5.4.1</i>	NA	NA
<p>B.5.4.25. Was the benchmark consistently used in the past by the same company for similar projects with similar risks?</p> <p>(EB 62 Annex 5, § 14) <i>If applicable, assess the past financial behaviour of the entity during the last 3 years in relation to similar projects.</i></p>	NA	<i>Not applicable. Please refer to B.5.4.1</i>	NA	NA
<p>B.5.4.26. Was the cost of debt calculated based on the weighted average cost of debt financing of the legal entity owning the CDM project activity?</p> <p>(EB 62 Annex 5, § 16) <i>If applicable, assess whether loans, bonds or debt financing from a parent company are calculated according to the latest "Guidance on Investment Analysis".</i></p>	NA	<i>Not applicable. Please refer to B.5.4.1</i>	NA	NA

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<i>In case that the debt structure of the project is not yet available, the cost of debt can be assumed as the commercial lending rate in the company or the yield of a 10-year bond issued by the government of the host county.</i>				
<p>B.5.4.27. Does the equity/debt ratio of the project reflect the long-term debt/equity finance structure of the legal entity owning the assets of the project activity? (EB 62 Annex 5, § 17)</p> <p><i>Assess the latest balance sheets of the legal entity owning the assets of the project activity, in case these are available and audited by a third party within two years prior to the submission of the PDD for validation, and the accounting books reflect the total value of all assets needed for the project activity.</i></p> <p><i>If debt/equity financing structure is not available, 50% equity, 50% debt shall be considered as default.</i></p>	NA	<i>Not applicable. Please refer to B.5.4.1</i>	NA	NA
B.5.5. Barrier analysis Step 3 or SSC additionality assessment				
<p>B.5.5.1. Are there any barriers given which have a clear and direct impact on the financial returns of the project? (VVS, v. 2.0, § 125)</p> <p><i>In case of LSC projects those issues <u>cannot be considered</u> as barriers and shall be assessed in the investment analysis. In case of SSC projects the same fundamentals as for LSC projects shall</i></p>	NA	<i>Not applicable. Please refer to B.5.4.1</i>	NA	NA

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<i>apply, i.e. the assessment of the investment barrier according to EB 62 Annex 5. Only unavailability of sources of finance and/or risk related barriers, for example, the risk related to technical failure that could have negative impact on financial performance are acceptable as barriers.</i>				
B.5.5.2. Has the unavailability of means of finance for the project been described and adequately substantiated? Do evidences doubtlessly prove that the financing of the project was assured only due to the benefit of the CDM? (EB 50 Annex 13, § 9)	NA	Not applicable. Please refer to B.5.4.1	NA	NA
B.5.5.3. Would provision of additional financial means lead to the mitigation of the barrier(s) demonstrated? (EB 50 Annex 13, § 7) <i>Describe why provision of additional financial means would not lead to mitigation of the barrier(s) demonstrated and hence analysing the project's additionality within the framework of an investment analysis is inappropriate. .</i>	NA	Not applicable. Please refer to B.5.4.1	NA	NA
B.5.5.4. How is it justified and evidenced that the barriers given in the PDD are real? (VVS, v. 2.0, § 126(a))	NA	Not applicable. Please refer to B.5.4.1	NA	NA
B.5.5.5. How is it justified that one or a set of	NA	Not applicable. Please refer to B.5.4.1	NA	NA

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
real barriers prevent(s) the implementation of the project activity and do not prevent the implementation of at least one of the alternatives? (VVS, v. 2.0, § 126 (b))				
B.5.5.6. Does the review of relevant background information on the nature of the company(ies) and entity(ies) involved in the financing and implementation of the project sufficiently justify that the barriers related to the lack of access to capital, technologies and skilled labour are real? (EB 50 Annex 13, § 4)	NA	Not applicable. Please refer to B.5.4.1	NA	NA
B.5.5.7. Has it been demonstrated in an objective way how the CDM alleviates each of the identified barriers to a level that the project is not prevented anymore from occurring by any of the barriers? (EB 50 Annex 13, § 5)	NA	Not applicable. Please refer to B.5.4.1	NA	NA
B.5.6. Common practice analysis Step 4 (in case of SSC projects or first-of-its-kind LSC projects skip this step)				
B.5.6.1. Is the defined region for the common practice analysis appropriate for the	NA	Not applicable as the candidate project activity is a proposed small scale CDM project activity.	NA	NA

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
technology/industry type? (VVS, v. 2.0, § 129(a)) <i>Describe why the project activity is not common practice in a transparent and unambiguous manner. If a region other than the entire host country is chosen, describe why this region is more appropriate.</i>				
In case of projects activities applying ACM002, go to B.5.6.4				
B.5.6.2. To what extent similar projects have been undertaken in the relevant region? (VVS, v. 2.0, § 129(b)) <i>Similar projects are considered those that take place in a comparable environment w.r.t. regulatory framework, investment climate, access to technology and financing, etc. Registered CDM PA and PA that have been published on the UNFCCC website are not to be considered as similar.</i>	NA	<i>Not applicable as the candidate project activity is a proposed small scale CDM project activity.</i>	NA	NA
B.5.6.3. In case similar projects are identified, are there any key differences between the proposed project and existing or ongoing projects and what kind of differences are observed? (VVS, v. 2.0, § 129(c))	NA	<i>Not applicable as the candidate project activity is a proposed small scale CDM project activity.</i>	NA	NA
B.5.6.4. In case of projects activities applying ACM002:	NA	<i>Not applicable as the candidate project activity is a proposed small scale CDM project activity.</i>	NA	NA

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
Has an output range as +/- 50% of the design output of the project activity been calculated in order to define the capacity range for "similar" projects? (EB65 Annex 21, § 47)				
B.5.6.5. In case of projects activities applying ACM002: Does N_{all} include only plants that have started commercial operation before the start date of the project and are within the applicable output range? (EB65 Annex 21, § 47) <i>Under N_{all}, registered CDM projects and projects undergoing validation are not to be included.</i>	NA	<i>Not applicable as the candidate project activity is a proposed small scale CDM project activity.</i>	NA	NA
B.5.6.6. In case of projects activities applying ACM002: Does N_{diff} include only plants that apply different "technology" than the project activity? (EB65 Annex 21, §§ 9, 47) <i>The term "technology" refers to energy fuel, investment climate (access to technology, subsidies, legal regulations, etc...) or unit cost of output.</i> <i>Assess how the essential distinctions to identify the different</i>	NA	<i>Not applicable as the candidate project activity is a proposed small scale CDM project activity.</i>	NA	NA

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<i>measures have been carried out.</i>				
B.5.7. Algorithms and/or formulae used to determine emissions reductions <i>It is assessed whether the steps taken and the equations and parameters applied in the PDD to calculate project emissions, baseline emissions, leakage and emission reductions comply with the requirements of the selected methodology including applicable tool(s).</i>				
<p>B.5.7.1. Are the equations applied correctly according to the applied approved methodology?</p> <p>(VVS, v. 2.0, §§ 72(c), 96)</p> <p><i>Describe clearly the steps taken to assess whether the methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions. Further take into consideration that all estimates of the baseline emissions can be replicated using the data and parameter values provided in the PDD.</i></p>	/AMS ID/ /PDD/	<p><input checked="" type="checkbox"/> The equations applied for calculation are correctly applied according to the approved methodology.</p> <p><input type="checkbox"/> The following mistakes have been identified in this context:</p> <p><i>Description:</i></p> <p>The equations to calculate baseline emissions and emission reductions have been applied correctly according to AMS ID version 17. As it is a renewable energy project, as per AMS ID version 17, there are no project emissions and leakage emissions associated with it.</p> <p><i>Validator's action:</i></p> <p>The submitted draft /PDD/ has been checked.</p> <p>The applied methodology AMS ID version 17 has been checked.</p> <p><i>Conclusion:</i></p> <p><i>It is hereby concluded that the equations to compute baseline emissions and emission reductions have been correctly applied as per the applied methodology AMS ID Version 17</i></p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<p>B.5.7.2. In case the methodology allows for different methodological choices, are the equations applied properly justified and have they been used reflecting the other methodological choices (i.e. baseline identification)?</p> <p>(VVS, v. 2.0, §§ 97, 98)</p> <p><i>Assess the correct selection and application of methodological choices. Describe whether proper justification has been provided (based on the choice of the baseline scenario, context of the project activity and other evidence provided) and whether the correct equations have been used reflecting the relevant methodological choices.</i></p>	<p>/AMS ID/ /PDD/ /EFTO OL/</p>	<p><u>Description:</u> <u>Under Section B.6:</u></p> <ol style="list-style-type: none"> In page no 13 of the PDD, it is unclear why the reference under the share of low cost/must run table refers to the historic and obsolete versions of the CEA database. In page no 14, under Step 4, which of the options as per the EF tool has been chosen, has not been clearly elucidated. <p><u>Validator's action:</u></p> <ol style="list-style-type: none"> The draft /PDD/ has been checked The applied methodology AMS ID version 17 has been consulted <p><u>Conclusion:</u></p> <p>The closure of CL B4 is pending.</p>	CL-B4	OK
<p>B.5.7.3. Have conservative assumptions been used when calculating the emission emissions?</p> <p>(VVS, v. 2.0, §§ 98, 99(a))</p> <p><i>Describe clearly the steps taken to assess whether all the assumptions and data used by the PP are listed in the PDD including references and sources and are conservatively interpreted in the PDD.</i></p>	<p>/AMS ID/ /PDD/ /ER/</p>	<p><u>Description:</u> <u>Under Section B.6.3:</u></p> <ol style="list-style-type: none"> The emissions reductions summary as provided under this section is generally incorrect in view of the erroneous Grid Emission Factor computation. The determined emission reductions attributable to the project activity are not conservative. Further, the values as presented in this section are generally inconsistent with the submitted GEF calculation excel spreadsheet. The value for the CUF utilized in the ER computations is unsupported. Further, how this value meets the requirements of EB 48 Annex 11 is also unclear. 	<p>CAR B5 CAR B6 CAR B7</p>	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
		<p><u>Under Section B.6.4:</u></p> <p>The tabulated ER summary is incorrect.</p> <p><i>Validator's action:</i></p> <ol style="list-style-type: none"> 1. The draft /PDD/ has been checked 2. The draft ER sheet has been checked. 3. The applied methodology AMS ID version 17 has been consulted <p><i>Conclusion:</i></p> <p>Closure of CAR B5, CAR B6 and CAR B7 is pending.</p>		
<p>B.5.7.4. Are all data sources and assumptions appropriate and parameters which remain fixed throughout the crediting period correct, applicable to the project and will lead to a conservative estimation of emission reductions?</p> <p>(VVS, v. 2.0, § 98)</p> <p><i>Describe clearly the steps taken to assess whether the values used for the fixed parameters are considered reasonable, correct and applicable in the context of the project activity. Check esp. chapter 6.2 of the PDD.</i></p>	<p>/AMS ID/ /PDD/ /ER/</p>	<p><i>Description:</i></p> <p>In the submitted Grid Emission Factor calculation excel spreadsheet, the calculation of the Emission Factor is incorrect.</p> <p><u>Under Section B.6.2:</u></p> <ol style="list-style-type: none"> 1. The determination of Operating margin emission factor is incorrect 2. The computation of Combined Margin emission factor is incorrect in view of faulty assumptions. <p>Please also refer to the submitted GEF calculation excel spreadsheet in this regard and please also refer to the above comment.</p> <p><i>Validator's action:</i></p> <ol style="list-style-type: none"> 1. The draft /PDD/ has been checked 2. The draft ER sheet has been checked. 3. The applied methodology AMS ID version 17 has been consulted <p><i>Conclusion:</i></p>	<p>CAR B5 CAR B6</p>	<p>OK</p>

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
		Closure of CAR B5 and CAR B5 is pending.		
<p>B.5.7.5. Are all ex-ante calculation values for monitoring parameters (as defined as per chapter B.7.1 of PDD) reasonable?</p> <p>(VVS, v. 2.0, § 98)</p> <p><i>Describe clearly the steps taken to assess whether the values used for the monitoring parameters are considered reasonable, applicable and conservative in the context of the project activity</i></p>	<p>/AMS ID/ /PDD/ /ER/</p>	<p><input type="checkbox"/> All "Values of data to be applied for the purpose of calculating expected emissions reductions" are considered to be reasonable, applicable and conservative.</p> <p><input checked="" type="checkbox"/> The following mistakes have been identified in this context: <u>Under Section B.7.1:</u></p> <p>The basis for the value of 16,206 MWh/ year reckoned is unclear to the DOE. Further, why there is a discrepancy in this value with the value for the same parameter under section B.6.3 has also not been clarified.</p> <p>Closure of CL B8 is pending.</p>	CL-B8	OK
<p>B.5.7.6. Are the emission reductions real, measurable and give long-term benefits related to the mitigation of climate change.</p> <p><i>Describe the steps taken to validate this issue.</i></p>	<p>/AMS ID/ /PDD/ /ER/</p>	<p><i>Description:</i></p> <p>CAR B4, CAR B5 and CAR B7 has been issued in this regard</p> <p><i>Validator's action:</i></p> <ol style="list-style-type: none"> 1. The draft /PDD/ has been checked 2. The draft ER sheet has been checked. 3. The applied methodology AMS ID version 17 has been consulted <p><i>Conclusion:</i></p> <p>Closure of CAR B4, CAR B5 and CAR B6 is pending.</p>	<p>CAR B4 CAR B5 CAR B6</p>	OK
<p>B.5.8. Monitoring of Emission Reductions</p> <p><i>It is assessed whether the monitoring plan is appropriate for the project activity and in line with the</i></p>				

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.				
<i>applied methodology.</i>								
<p>B.5.8.1. Are all monitoring parameters required by the applied methodology contained in the monitoring plan?</p> <p>(VVS, v. 2.0, §§ 72 (e), 131, 132 (a) (i))</p> <p><i>Assess whether all applicable parameters listed in the methodology are included in the monitoring plan.</i></p> <p><i>Pl. check further whether the selection of parameters not to be monitored (section B.6.2) is appropriate and in line with the applied methodology.</i></p> <p><i>In case of different approaches can be chosen acc. to the methodology assess whether the selection of parameters is justified and correct.</i></p>	<p>/AMS ID/ /PDD/</p>	<p><i>Description:</i> If is unclear if grid electricity import for auxiliary consumption purposes is also being monitored separately by separate meters.</p> <p><i>Validator's action:</i></p> <p>1. The draft /PDD/ has been checked</p> <p>2. The applied methodology AMS ID version 17 has been consulted</p> <p><i>Conclusion:</i> Closure of CL B8 is pending.</p>	CL-B8	OK				
<p>B.5.8.2. Are the means of monitoring of all parameters contained in the monitoring plan feasible within the project design?</p> <p>(VVS, v. 2.0, §§ 132 (b) (i), 133(b))</p> <p><i>Describe the steps undertaken to assess whether the monitoring arrangements described in the monitoring paln are feasible witin the project design.</i></p>	<p>/PDD/ /AMS ID/</p>	<p><i>Description:</i> CL B8 and CAR B9 have been issued in this regard.</p> <p><i>Validator's action:</i></p> <p>1. The draft /PDD/ has been checked</p> <p>2. The applied methodology AMS ID version 17 has been consulted</p> <p><i>Conclusion:</i> Closure of CL B8 and CAR B9 is pending.</p>	<p>CL-B8 CAR B9</p>	OK				
<p>B.5.8.3. [Name of the Monitoring Parameter, e.g, EG_v]</p>	<p>/AMS ID/</p>	<table> <tr> <td>Rrequirement</td> <td>OK</td> <td>Not OK</td> <td>N/A</td> </tr> </table>	Rrequirement	OK	Not OK	N/A	CL-B8	OK
Rrequirement	OK	Not OK	N/A					

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.																																												
<p>(VVS, v. 2.0, § 132(a)– (ii))</p> <p>Indicate whether the provided information for the monitoring parameter complies with the approved methodology including applicable tool(s) in the aspects listed.</p> <p>For checking the use of international standards in the nomenclature, consider:</p> <p>a) Standard format (e.g. 1,000 representing one thousand and 1.0 representing one).</p> <p>b) Values shall be directly given in SI units – or additionally to original units transferred to SI.</p> <p>c) Short scale naming system: (Only) million = 10⁶ and billion 10⁹ shall be used.</p>	/PDD/	<table><tr><td>Label</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>Data Unit</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>Description</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>Source of data</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>Measurement equipment / measure method</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>Monitoring frequency</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>QA/QC procedures</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>Purpose of data</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>Standard format</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>SI units</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>Short scale naming</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr></table>	Label	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Data Unit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Description	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Source of data	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Measurement equipment / measure method	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Monitoring frequency	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	QA/QC procedures	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Purpose of data	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Standard format	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SI units	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Short scale naming	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
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<p>B.5.8.4. Have all means of implementing the monitoring plan, e.g. equations necessary for ex-post emission reduction calculation, been described clearly and in line with the methodology?</p> <p>(VVS, v. 2.0, § 131)</p> <p>Check whether all necessary equations have been provided in the PDD. Pl. consider that ex-post and ex-ante calculations might be different.</p>	<p>/AMS ID/</p> <p>/PDD/</p>	<p>Description:</p> <p>The emissions reductions summary as provided under this section is generally incorrect in view of the erroneous Grid Emission Factor computation. The determined emission reductions attributable to the project activity are not conservative. Further, the values as presented in this section of the /PDD/ are generally inconsistent with the submitted GEF calculation excel spreadsheet.</p> <p>Validator's action:</p> <p>Submitted draft /PDD/ has been checked</p> <p>Validation site visit and interview with project personnel was</p>	<p>CAR B7</p>	<p>OK</p>																																												

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<i>Please consider that additional equations might be necessary to calculate auxiliary parameters.</i>		undertaken on 14.09.2012 and 15.09.2012 <i>Conclusion:</i> Closure of CAR B7 is pending.		
B.5.8.5. Is it likely that the monitoring arrangements described in the PDD can properly be implemented in the context of the project activity? (VVS, v. 2.0, § 132(b) (i)) <i>Assess whether the described monitoring arrangements are sufficient and realistic to enable a thorough monitoring. Pl. consider also special monitoring conditions, e.g. downtimes of monitoring equipment etc.</i>	/AMS ID/ /PDD/ /IM01/ /IM02/	<i>Description:</i> Findings in the nature of clarifications have been issued in this regard. <i>Validator's action:</i> Submitted draft /PDD/ has been checked Validation site visit and interview with project personnel was undertaken on 14.09.2012 and 15.09.2012 <i>Conclusion:</i> Closure of CL b8 and CAR B9 is pending	CL-B8 CAR B9	OK
B.5.8.6. Are the QA/QC procedures appropriate sufficient to ensure the emission reductions achieved from the project activity can be reported ex-post and verified? (VVS, v. 2.0, § 132(b) (ii)) <i>Please consider the description given in section B.7.2. Describe which QA/QC provisions are considered. Address Quality Management System provisions, calibration and maintenance of equipment. Address further any review procedures.</i>	/AMS ID/ /PDD/ /IM01/ /IM02/	<i>Description:</i> CL B8 and CAR B9 have been issued in this regard. <i>Validator's action:</i> Submitted draft /PDD/ has been checked Validation site visit and interview with project personnel was undertaken on 14.09.2012 and 15.09.2012 <i>Conclusion:</i> Closure of CL B8 and CAR B9 is pending.	CL-B8 CAR B9	OK
B.5.8.7. Are procedures identified for data management?	/AMS ID/	<i>Description:</i> Procedures have been identified for data management.	OK	-

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<p>(VVS, v. 2.0, § 132(b) (ii))</p> <p><i>Check whether appropriate provisions are considered for data management including responsibilities, what records to keep, storage area of records and how to process performance documentation</i></p> <p><i>Check further the data archiving provisions for the project activity and ensure that provisions are made to archive data for the whole crediting period + 2 years.</i></p>	<p>/PDD/ /IM01/ /IM02/</p>	<p><i>Validator's action:</i></p> <p>The draft /PDD/ has been checked</p> <p>Validation site visit and interview with project personnel was conducted on 14.09.2012 and 15.09.2012</p> <p><i>Conclusion:</i></p> <p>It is hereby concluded that procedures have been identified for appropriate data management.</p>		
<p>C. Duration and Crediting Period</p> <p><i>It is assessed whether the temporary boundaries of the project are clearly defined.</i></p>				

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<p>C.1.1. Is the project start date consistent with the available evidences?</p> <p>(VVS, v. 2.0, § 106)</p> <p><i>Describe the evidence assessed regarding the prior consideration of the CDM (if necessary). Describe whether the evidence to support such consideration is adequately and transparently described in the PDD.</i></p>	<p>/PDD/ /PO/ /IM01/ /IM02/ /CDMG LOSS/ /PDD- G/</p>	<p><i>Description:</i> <u>Under Section C.1.1:</u></p> <ol style="list-style-type: none"> 1. This section refers to an obsolete guideline requirement EB 41 paragraph 67. 2. This section is not as per the guidelines to completing the CDM-SSC-PDD <p><i>Validator's action:</i> The draft /PDD/ has been checked</p> <p>Validation site visit, interview with project personnel and documents verification was conducted on 14.09.2012 and 15.09.2012</p> <p><i>Conclusion:</i> Closure of CAR C1 is pending.</p>	CAR C1	OK
<p>C.1.2. Is the project's operational lifetime clearly defined and evidenced?</p> <p><i>Check whether the project lifetime is correctly defined. Consider the latest "Guidance on the assessment of investment analysis".</i></p> <p><i>Check in case of phased implementation this has been reflected throughout the whole PDD incl. the financial assessment, if applicable.</i></p>	<p>/PDD/ /PO/ /TECH/ /IM01/ /IM02/ /CDMG LOSS/ /PDD- G/</p>	<p><i>Description:</i> <u>Under Section C.1.2:</u></p> <p>The expected operational lifetime of the project activity is not borne out by any documentary supporting evidence.</p> <p><i>Validator's action:</i> The draft /PDD/ has been checked</p> <p>Validation site visit, interview with project personnel and documents verification was conducted on 14.09.2012 and 15.09.2012</p> <p><i>Conclusion:</i> Closure of CL C2 is pending.</p>	CL-C2	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<p>C.1.3. Is the start of the crediting period clearly defined and reasonable?</p> <p><i>Check whether the envisaged starting date of the crediting period is realistic, taking into consideration the times needed for validation and registration.</i></p>	<p>/PDD/ /PO/ /TECH/ /IM01/ /IM02/ /CDMG LOSS/ /PDD- G/</p>	<p><i>Description:</i></p> <p><u>Under Section C.2.2:</u></p> <p>The start date of the crediting period appears to be ambitious and it has not been clarified if it needs amendment with a more pragmatic start date.</p> <p>The draft /PDD/ has been checked</p> <p>Validation site visit, interview with project personnel and documents verification was conducted on 14.09.2012 and 15.09.2012</p> <p><i>Conclusion:</i></p> <p>Closure of CL C3 is pending.</p>	CL C3	OK
<p>D. Environmental Impacts</p> <p><i>Documentation on the analysis of the environmental impacts will be assessed, and if deemed significant, an EIA should be provided to the DOE.</i></p>				
<p>D.1.1. Are there any Host Party requirements for an Environmental Impact Assessment (EIA)?</p> <p>(VVS, v. 2.0, § 134-135)</p> <p><i>Check the host party regulations regarding EIA. If no requirements for an EIA exist, discuss whether the project participants conducted an analysis for the environmental impacts of the project activity.</i></p>	<p>/PDD/ /EIA/ /dna/ /moef/ /SC/ /PO/ /TECH/</p>	<p><i>Description:</i></p> <p>The candidate project involves solar photovoltaic based renewable power generation. It is a clean source of energy with no adverse fallouts of fossil fuel based generation. Thus, it is exempt from EIA as per the notification of Ministry of Environment and Forests (MoEF), Government of India.</p> <p><i>Validator's action:</i></p> <p>The EIA notification of MoEF has been checked.</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
		<p><i>Conclusion:</i></p> <p>It is hereby concluded that the candidate project is exempt from EIA. However, it is verified that the project has obtained other regulatory and statutory approvals and clearances. This was verified during the validation site visit and document verification undertaken on 14.09.2012 and 15.09.2012.</p>		
<p>D.1.2. In case an Environmental Impact Assessment (EIA) is requested by the host party, has it been carried out in accordance with the host Party procedures?</p> <p>(VVS, v. 2.0, § 135) <i>Check the EIA and its approval, if applicable.</i></p>	NA	Please refer to D.1.1	NA	NA
<p>D.1.3. Are transboundary environmental impacts considered in the analysis?</p> <p>(VVS, v. 2.0, § 134) <i>Check the documents and local official sources / expertise regarding transboundary environmental impacts.</i></p>	NA	Please refer to D.1.1	NA	NA
<p>E. Stakeholder Comments</p> <p><i>The DOE should ensure that stakeholder comments have been invited with appropriate media and that due account has been taken of any comments received.</i></p>				

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<p>E.1.1. Have relevant local stakeholders been invited to consultation prior to the publication of the PDD?</p> <p>(VVS, v. 2.0, § 138-140)</p> <p><i>Check by means of document review and interviews with local stakeholders if and when a local stakeholder consultation process has been carried out.</i></p>	<p>/PDD/ /IM01/ /IM02/ /IM03/</p>	<p><i>Description:</i></p> <p><u>Under Section E.1:</u></p> <p>The local stakeholder consultation related documents have not been submitted for validation.</p> <p>This section does not elaborate on how the comments relating to the proposed CDM project activity were invited in an open and transparent fashion by means of the local stakeholder consultation meet.</p> <p>The last line of the 2nd paragraph under this section appears to be incomplete.</p> <p><u>Under Section E.3:</u></p> <p>The last line under this section appears to be irrelevant / or has not been explained clearly.</p> <p><i>Validator's action:</i></p> <p>Validation site visit, document verification and interview with project proponent, project personnel, project consultant and local stakeholders undertaken on 14.09.2012 and 15.09.2012.</p> <p><i>Conclusion:</i></p> <p>Closure of CAR E1 is pending.</p>	CAR E1	OK
<p>E.1.2. Can the local stakeholder consultation process be assessed as adequate?</p> <p>(VVS, v. 2.0, § 138-140)</p> <p><i>Describe what assessment steps have been undertaken to assess the adequacy of the stakeholder consultation</i></p>	<p>/PDD/ /IM01/ /IM02/ /IM03/</p>	<p><i>Description:</i></p> <p><u>Under Section E.1:</u></p> <p>The local stakeholder consultation related documents have not been submitted for validation.</p> <p>This section does not elaborate on how the comments relating to the proposed CDM project activity were invited in an open and transparent</p>	CAR E1	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<p><i>process. Give a final opinion on the adequacy.</i></p> <p><i>Please consider the following requirements in this context:</i></p> <p><i>(a) Comments by local stakeholders that can reasonably be considered relevant for the proposed CDM project activity, have been invited;</i></p> <p><i>(b) The summary of the comments received as provided in the PDD is complete;</i></p> <p><i>(c) The project participants have taken due account of any comments received and have described this process in the PDD.</i></p>		<p>fashion by means of the local stakeholder consultation meet.</p> <p>The last line of the 2nd paragraph under this section appears to be incomplete.</p> <p><u>Under Section E.3:</u></p> <p>The last line under this section appears to be irrelevant / or has not been explained clearly.</p> <p><i>Validator's action:</i></p> <p>Validation site visit, document verification and interview with project proponent, project personnel, project consultant and local stakeholders undertaken on 14.09.2012 and 15.09.2012.</p> <p><i>Conclusion:</i></p> <p>Closure of CAR E1 is pending.</p>		
F. Others				
<p>F.1. Approval – Contribution to Sustainable Development</p> <p><i>The written approval of the parties involved is a mandatory requirement.</i></p>				
<p>F.1.1. Have written approvals of all parties involved been provided to the validation team?</p> <p>(VVS, v. 2.0, § 38)</p> <p><i>Indicate whether a letter of approval has been received, with</i></p>	/HCA/ /PDD/	<p><i>Description:</i></p> <p>The Host Country Approval (/HCA/) for this project activity is yet to be submitted.</p> <p><i>Validator's action:</i></p> <p>The submitted initial version of the /PDD/ has been examined</p>	CAR E1	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<i>a clear reference to the supporting documentation.</i> <i>Indicate whether this letter was provided to the DOE by the project participants or directly by the DNA</i>		A validation site visit and interview with the project proponent and project consultant was undertaken on 14.09.2012 and 15.09.2012 <i>Conclusion:</i> Closure of CAR F1 is pending.		
F.1.2. Are the approvals issued from organisations listed as DNAs on the UNFCCC CDM website? (VVS, v. 2.0, §§ 41) <i>Indicate the means of validation employed to assess the authenticity, i.e. in case of doubt whether LoA has been verified with the DNA. Further describe which entity submitted the LoA for validation.</i>	/HCA/ /PDD/	<i>Description:</i> The Host Country Approval (/HCA/) for this project activity is yet to be submitted. <i>Validator's action:</i> The submitted initial version of the /PDD/ has been examined A validation site visit and interview with the project proponent and project consultant was undertaken on 14.09.2012 and 15.09.2012 <i>Conclusion:</i> Closure of CAR F1 is pending.	CAR F1	OK
F.1.3. Do the written approvals confirm that the corresponding party is a Party to the Kyoto Protocol? (VVS, v. 2.0, § 39(a))	/HCA/ /PDD/	<i>Description:</i> The Host Country Approval (/HCA/) for this project activity is yet to be submitted. <i>Validator's action:</i> The submitted initial version of the /PDD/ has been examined A validation site visit and interview with the project proponent and project consultant was undertaken on 14.09.2012 and 15.09.2012 <i>Conclusion:</i> Closure of CAR F1 is pending.	CAR F1	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
F.1.4. Do the written approvals confirm that the participation is voluntary? (VVS, v. 2.0, § 39(b))	/HCA/ /PDD/	<p><i>Description:</i></p> <p>The Host Country Approval (/HCA/) for this project activity is yet to be submitted.</p> <p><i>Validator's action:</i></p> <p>The submitted initial version of the /PDD/ has been examined</p> <p>A validation site visit and interview with the project proponent and project consultant was undertaken on 14.09.2012 and 15.09.2012</p> <p><i>Conclusion:</i></p> <p>Closure of CAR F1 is pending.</p>	CAR F1	OK
F.1.5. Does the written approval from the host country confirm that the project contributes to the sustainable development in the country? (VVS, v. 2.0, § 39(c))	/HCA/ /PDD/	<p><i>Description:</i></p> <p>The Host Country Approval (/HCA/) for this project activity is yet to be submitted.</p> <p><i>Validator's action:</i></p> <p>The submitted initial version of the /PDD/ has been examined</p> <p>A validation site visit and interview with the project proponent and project consultant was undertaken on 14.09.2012 and 15.09.2012</p> <p><i>Conclusion:</i></p> <p>Closure of CAR F1 is pending.</p>	CAR F1	OK
F.1.6. Do the written approvals refer to the precise project title in the PDD submitted for registration or an additional specification of the project activity, e.g. PDD version number?	/HCA/ /PDD/	<p><i>Description:</i></p> <p>The Host Country Approval (/HCA/) for this project activity is yet to be submitted.</p> <p><i>Validator's action:</i></p>	CAR F1	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
(VVS, v. 2.0, §§ 39(d))		<p>The submitted initial version of the /PDD/ has been examined</p> <p>A validation site visit and interview with the project proponent and project consultant was undertaken on 14.09.2012 and 15.09.2012</p> <p><i>Conclusion:</i></p> <p>Closure of CAR F1 is pending.</p>		
<p>F.1.7. Are the written approvals unconditional with regard to F.1.3 to F.1.6?</p> <p>(VVS, v. 2.0, § 40)</p>	<p>/HCA/ /PDD/</p>	<p><i>Description:</i></p> <p>The Host Country Approval (/HCA/) for this project activity is yet to be submitted.</p> <p><i>Validator's action:</i></p> <p>The submitted initial version of the /PDD/ has been examined</p> <p>A validation site visit and interview with the project proponent and project consultant was undertaken on 14.09.2012 and 15.09.2012</p> <p><i>Conclusion:</i></p> <p>Closure of CAR F1 is pending.</p>	CAR F1	OK
<p>F.1.8. Is the information regarding the project participants listed in tabular form in PDD and is internally consistent with the information provided in the section that contains the contact information of the project participants?</p> <p>(VVS, v. 2.0, § 46)</p>	<p>/HCA/ /PDD/</p>	<p><i>Description:</i></p> <p>the information regarding the project participants listed in tabular form in PDD is found to be internally consistent with the information provided in the section that contains the contact information of the project participants. However, the /HCA/ for this project activity is yet to be submitted</p> <p><i>Validator's action:</i></p> <p>The submitted initial version of the /PDD/ has been examined</p> <p>A validation site visit and interview with the project proponent and</p>	CAR F1	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
		project consultant was undertaken on 14.09.2012 and 15.09.2012 <i>Conclusion:</i> Closure of CAR F1 is pending.		
F.1.9. Are all project participants listed in the PDD approved at least by one Party involved? (VVS, v. 2.0, § 45) <i>Indicate whether the participation of the project participant(s) has been approved by a Party to the Kyoto Protocol.</i> <i>Describe the means of validation employed to draw this conclusion.</i>	/HCA/ /PDD/	<i>Description:</i> The Host Country Approval (/HCA/) for this project activity is yet to be submitted. <i>Validator's action:</i> The submitted initial version of the /PDD/ has been examined A validation site visit and interview with the project proponent and project consultant was undertaken on 14.09.2012 and 15.09.2012 <i>Conclusion:</i> Closure of CAR F1 is pending.	CAR F1	OK
F.1.10. Are any other project participants than those authorized as project participants listed in the PDD? (VVS, v. 2.0, § 47)	/HCA/ /PDD/	<i>Description:</i> The Host Country Approval (/HCA/) for this project activity is yet to be submitted. <i>Validator's action:</i> The submitted initial version of the /PDD/ has been examined A validation site visit and interview with the project proponent and project consultant was undertaken on 14.09.2012 and 15.09.2012 <i>Conclusion:</i> Closure of CAR F1 is pending.	CAR F1	OK
F.2. Modalities of Communication Statement				

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<i>A due diligence on the Modalities of Communication statement in accordance with the requirements established in the VVS is mandatory.</i>				
<p>F.2.1. Has a valid Modalities of Communication (MoC) been provided to the validation team from a project participant with whom the DOE has a contractual relationship? (VVS, v. 02, § 55)</p> <p><i>Indicate whether a MoC has been received, with a clear reference to the contractual relationship of the project participant with the DOE.</i></p>	<p>/MoC/ /PDD/</p>	<p><i>Description:</i> The Modalities of Communication (MoC) for this project activity is yet to be submitted.</p> <p><i>Validator's action:</i> The submitted initial version of the /PDD/ has been examined A validation site visit and interview with the project proponent and project consultant was undertaken on 14.09.2012 and 15.09.2012</p> <p><i>Conclusion:</i> Closure of CAR F1 is pending.</p>	CAR F1	OK
<p>F.2.2. Has the MoC been signed by a duly authorized person on behalf of the respective project participant? (VVS, v. 2.0, §§ 54, 56)</p> <p><i>Please Indicate how the personal and corporate identities of all project participants and focal points included in the MoC statement have been validated,:</i></p>	<p>/MoC/ /PDD/</p>	<p><i>Description:</i> The Modalities of Communication (MoC) for this project activity is yet to be submitted.</p> <p><i>Validator's action:</i> The submitted initial version of the /PDD/ has been examined A validation site visit and interview with the project proponent and project consultant was undertaken on 14.09.2012 and 15.09.2012</p> <p><i>Conclusion:</i> Closure of CAR F1 is pending.</p>	CAR F1	OK
F.2.3. Has the MoC statement correctly	/MoC/	<i>Description:</i>	CAR	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
been completed? (VVS, v. 2.0, §§ 59, 60)	/PDD/	<p>The Modalities of Communication (MoC) for this project activity is yet to be submitted.</p> <p><i>Validator's action:</i></p> <p>The submitted initial version of the /PDD/ has been examined</p> <p>A validation site visit and interview with the project proponent and project consultant was undertaken on 14.09.2012 and 15.09.2012</p> <p><i>Conclusion:</i></p> <p>Closure of CAR F1 is pending.</p>	F1	
F.3. PDD editorial aspects <i>The PDD used as a basis for validation shall be prepared in accordance with the latest template and guidance from the CDM Executive Board available on the UNFCCC CDM website.</i>				
F.3.1. Has the latest version of the PDD form been applied? (VVS, v. 2.0, § 62)	/PDD/ /PDD- T/ /unfccc/	<p><i>Description:</i></p> <p>The latest version of the CDM-SSC-PDD template version 04.1 has been used.</p> <p><i>Validator's action:</i></p> <p>The UNFCCC page has been referred to for checking the latest applicable version of the CDM-SSC-/PDD/ template form</p> <p><i>Conclusion:</i></p> <p>It is hereby concluded that the latest applicable version of the /PDD/ form has been used.</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
F.3.2. Has the PDD been duly filled in accordance with the latest guidance(s)? (VVS, v. 2.0, § 63)	/PDD/ /PDD/- G/ /unfccc/	<p><i>Description:</i> Findings have been issued in this regard.</p> <p><i>Validator's action:</i> The draft /PDD/ has been verified The latest /PDD/ filling guidelines has been referred from the UNFCCC page.</p> <p><i>Conclusion:</i> Closure of the following are pending: CAR A1, CAR A2, CAR A3, CAR B1, CAR B2, CAR C1, CAR E1 and CAR F1</p>	<p>CAR A1</p> <p>CAR A2</p> <p>CAR A3</p> <p>CAR B1</p> <p>CAR B2</p> <p>CAR G1</p> <p>CAR E1</p> <p>CAR F1</p>	OK

ANNEX 2: ASSESSMENT OF APPLICABILITY CRITERIA

Table A-2: Assessment of Applicability Criteria (VVS, v. 2.0 §§ 70 – 76)

Applicability Criteria	Evidence used	met	not met	N/A	Assessment of validation team (results and means of assessment)
<p>This methodology comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass:</p> <p>Supplying electricity to a national or a regional grid; or</p> <p>Supplying electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling.</p>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>The project activity involves solar energy based renewable energy generation and supplying the generated energy to the NEWNE grid. The project activity uses Solar PV thin-film technology manufactured by MiaSole technologies, California, USA. The supplier agreement between MiaSole and the PP, for supply of solar panels, and the /PPA/ signed between NVVN and the PP have been verified in this regard.</p> <p>It is hereby concluded that this applicability condition is met.</p>
<p>Illustration of respective situations under which each of the methodology (i.e. AMS-I.D, AMS-I.F and AMS-I.A) applies is included in Table 2.</p>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>The situation under which the methodology AMS ID version 17 is applicable to the proposed candidate CDM project activity is illustrated in Appendix 3 of the PDD. The project activity proposes to supply the generated solar power based renewable energy to the NEWNE grid which is corroborated from the signed PPA.</p> <p>It is hereby concluded that this applicability condition is met.</p>

<p>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).</p>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>The project activity is a Greenfield plant. During the validation site visit conducted from 2012.09.14 to 2012.09.15, it was corroborated that the project is a Greenfield plant and there was no similar plant operating at the site prior to the implementation of the proposed candidate project. Also, the supplier agreement for supply of solar PV thin-film panels and the Host Country Approval for the project have been verified. It is hereby concluded that the applicability criterion clause (a) is successfully met.</p>
<p>Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology:</p> <ul style="list-style-type: none"> • 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. 		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>The candidate project is solar power based renewable energy generation. The HCA, supplier agreement for supply of solar panels and the signed PPA have been verified in this regard. This applicability condition is not applicable.</p>

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.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>The proposed CDM project involves solar energy based renewable energy generation and supply of the generated energy to the NEWNE grid. Thus, it involves only a renewable component. The project is selected under Phase I, Batch II of the Jawaharlal Nehru National Solar Mission of the Government of India under which only solar power based renewable energy generating units alone can participate. The following website has been referred in this regard: http://www.nvvn.co.in/BII_Proj_FC_Achieved.pdf Further, the capacity of the plant is 10MW which is much less than the 15MW threshold applicable for small scale project activities. The signed PPA is verified in this regard. Thus, this applicability condition is not applicable.</p>
Combined heat and power (co-generation) systems are not eligible under this category.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>The candidate project involves solar power based renewable energy generation and thus does not involve combined heat and power systems. The supplier agreement for supply of solar modules and the signed /PPA/ have been verified in this regard. This applicability condition is not applicable.</p>
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.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>During the validation site visit from 2012.09.14 to 2012.09.15, it was corroborated that the proposed project is a Greenfield plant and does not involve any addition of renewable energy generation units at an existing renewable power generation facility. The supplier agreement for supply of solar modules, the signed PPA and the Host Country Approval have been verified in this regard. This applicability condition is not applicable.</p>
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.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>The project activity is a Greenfield plant which was confirmed during the validation site visit conducted from 2012.09.14 to 2012.09.15 and is not a retrofit or a replacement activity. Further, the supplier agreement for supply of solar modules and the Host Country Approval have been verified in this regard. This applicability condition is not applicable.</p>

The spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the CDM project power plant is connected to.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The spatial extent of the project boundary includes the project equipment like solar panels, batteries, inverters, metering equipment, the transformers, the substation and the NEWNE grid. This is as per the methodology. During the validation site visit conducted from 2012.09.14 to 2012.09.15, it was verified that the project is a Greenfield plant. The PPA was verified and based upon interview with project personnel, it is confirmed that the project boundary is as per the methodological requirements. This applicability condition is therefore met.
The monitoring parameter "Quantity of net electricity supplied to the grid in year y"		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	During the validation site visit conducted from 2012.09.14 to 2012.09.15, it was verified that the project is a Greenfield plant with any of the project related equipment yet to be in place. However, the /HCA/, the supplier agreement for supply of solar modules and the PPA was verified and based upon interview with project personnel, it is confirmed that the Quantity of net electricity supplied to the grid would be duly monitored and thus this requirement is as per the methodology.

ANNEX 3: ASSESSMENT OF BASELINE IDENTIFICATION

Table A-3: Assessment of Baseline Identification (VVS, v. 2.0 §§ 88 – 95)

<input checked="" type="checkbox"/>	Baseline is pre-defined by the methodology
<input type="checkbox"/>	Assessment of baseline alternatives see below

Baseline Alternatives identified	In line with the Methodology?	Eliminated	Reasons for elimination / non-elimination from list of alternatives	Evidence used	DOE Assessment	
					Appropriateness of elimination	Assessment of validation team (results and means of assessment)
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>		-	<input type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		-	<input checked="" type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		-	<input checked="" type="checkbox"/>	

ANNEX 4: ASSESSMENT OF FINANCIAL PARAMETERS

Table A-4: Assessment of Financial Parameters (VVS, v. 2.0, §§ 120, 121 / in case financial parameters stem from FSR §122,)

<input checked="" type="checkbox"/>	No financial parameters are used for additionality justification					
<input type="checkbox"/>	Assessment of all financial parameters see below					
Parameter	Value applied	Unit	Source of Information (please indicate document and page)	Reference	DOE ASSESSMENT	
					Correctness of value applied	Comment
				//	<input type="checkbox"/>	L1: L2: L3:
				//	<input type="checkbox"/>	L1: L2: L3:
				//	<input type="checkbox"/>	L1: L2: L3:
				//	<input type="checkbox"/>	L1: L2: L3:
				//	<input type="checkbox"/>	L1: L2: L3:

ANNEX 5: ASSESSMENT OF BARRIER ANALYSIS

Table A-5: Assessment of Barrier Analysis (VVS, v. 2.0, §§ 124-127)

<input checked="" type="checkbox"/>		No barrier parameters are used for additionality justification		
<input type="checkbox"/>		Assessment of barriers see below		
Kind of Barrier (invest, tech, other)	Description of Barrier	Evidence used	Assessment of validation team	
			Appropriateness of information source	Explanation of final result
			<input checked="" type="checkbox"/>	
			<input checked="" type="checkbox"/>	
			<input checked="" type="checkbox"/>	
			<input checked="" type="checkbox"/>	
			<input checked="" type="checkbox"/>	
			<input checked="" type="checkbox"/>	
			<input checked="" type="checkbox"/>	
			<input checked="" type="checkbox"/>	

ANNEX 6: OUTCOME OF THE GSCP

Table A-6: Outcome of the Global Stakeholder Consultation Process

(VVS Version 2.0, §§ 34- 37)

<input checked="" type="checkbox"/>	No comments were received during the global stakeholder consultation period ¹⁶					
<input type="checkbox"/>	Comments were received during the global stakeholder consultation period. The comments (in unedited form) and the consideration/response of the validation team are presented below:					
Comment No.:	Comment by:	Inserted on:	Subject	Comment *)	Action taken by the validation team to take due account on the comment *)	Conclusion (incl. CARs CLs or FARs)

^{*)} In case clarifications have been requested by the validation team corresponding rows shall be added

¹⁶ <https://cdm.unfccc.int/Projects/Validation/DB/9WDHQYI6CWLON5Z734VGI8XU7PQXA7/view.html>

ANNEX 7: STATEMENTS OF COMPETENCE OF INVOLVED PERSONNEL



Statement of Competence

Appointment and authorization according to the procedures
of the TÜV NORD JI/CDM Certification Program

Mr. Mohinder Amarnath B. J.

SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor	2013-06-21
Validation, Verification		
VCS	Lead Assessor	2013-06-21

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewable Energies
3.1	Energy Demand
4.1	Cement Sector
13.1	Waste Handling and Disposal

053 – Rev. 1, Date: 2011-06-20

053_S01-F003_2011-06-20_rev1

S01-F003 rev0 / 2010-04-19



Statement of Competence

Appointment and authorization according to the procedures
of the TÜV NORD JI/CDM Certification Program

Mr. Prakash Narayanan R.

SCHEME	STATUS	VALID UNTIL
CDM	Assessor (Validation, Verification)	2015-01-05
VCS	Assessor	2015-01-05

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewable Energies
3.1	Energy Demand
13.1	Waste Handling and Disposal

231 – Rev. 2, Date: 2012-01-06

231_S01-F003_2012-01-06_rev2.doc

S01-F003 rev1 / 2011-08-02



Statement of Competence
Appointment and authorization according to the procedures
of the TÜV NORD JI/CDM Certification Program

Mr. Ningthoujam Premjit Singh

SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor	2015-02-09
Validation, Verification		
VCS	Lead Assessor	2015-02-09

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewable Energies

076 – Rev. 1, Date: 2012-02-10



Statement of Competence
Appointment and authorization according to the procedures
of the TÜV NORD JI/CDM Certification Program

Mr. Saroj Kumar Sahoo

SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor	2014-08-02
VCS	Lead Assessor	2014-08-02

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewable Energies

086 – Rev. 2, Date: 2011-08-03



Statement of Competence

Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program

Mr. Kunal Rami

SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor (Validation, Verification) Technical Review	2015-01-19
VCS	Lead Assessor Technical Review	2015-01-19

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA	TR INCLUDE SUB-AREAS
1.2	Renewable Energies	1.2.1 Hydro 1.2.2 Wind 1.2.3 Geothermal 1.2.4 Solar 1.2.5 Tidal
6.1	Construction	
13.1	Waste handling and disposal	13.1.1 Waste management 13.1.2 Waste water management

244 – Rev. 3, Date: 2012-01-20

224_S01-F003_2012-01-20_rev3.doc

S01-F003 rev0 / 2010-04-19



Statement of Competence

Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program

Mr. Rainer Winter

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification) Technical Reviewer	2013-07-03
Ji	Senior Assessor Technical Reviewer	2013-07-03
VCS / ISO 14064-2	Senior Assessor Technical Reviewer	2013-07-03

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA	TR SUBCATEGORIES
1.1	Thermal Energy Generation	
1.2	Renewable Energies	1.2.1 Hydro 1.2.2 Wind 1.2.3 Geothermal 1.2.4 Solar 1.2.5 Tidal
4.1	Cement Sector	
4.3	Iron and Steel	
4.5	Waste Heat Recovery	
4.8	Glass	
5.1	Chemical Process Industries	
9.1	Metal Production	
11.1	Chemical Process Industries	
11.2	GHG Capture and Destruction	
12.1	Chemical Process Industries	
13.1	Waste Handling and Disposal	13.1.1 Waste Management

003 - Rev. 6, Date: 2012-10-12

003_S01-A005-F20_2012-10-12_rev6.doc

S01-A005-F20 rev3 / 2012-10-25