



VALIDATION REPORT

NORTHWEST ENERGY PRIVATE LIMITED

VALIDATION OF THE GRID CONNECTED SOLAR PV POWER PLANT IN JODHPUR, RAJASTHAN

BUREAU VERITAS CERTIFICATION

REPORT No. **INDIA-val/452.49/2012**

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VALIDATION REPORT

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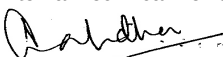
Summary:

Bureau Veritas Certification has made the validation of the Grid connected solar PV power plant in Jodhpur, Rajasthan project of Northwest Energy Private Limited located in Village-Rawra, Tehsil-Phalodi of Jodhpur district in the state of Rajasthan, India on the basis of UNFCCC criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM rules and modalities and the subsequent decisions by the CDM Executive Board, as well as the host country criteria.

The validation scope is defined as an independent and objective review of the project design document, the project's baseline study, monitoring plan and other relevant documents, and consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final validation report and opinion. The overall validation, from Contract Review to Validation Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

The first output of the validation process is a list of Clarification and Corrective Actions Requests (CL and CAR), presented in Appendix A. Taking into account this output, the project proponent revised its project design document.

In summary, it is Bureau Veritas Certification's opinion that the project correctly applies the baseline and monitoring methodology AMS I.D. version 17 and meets the relevant UNFCCC requirements for the CDM and the relevant host country criteria.

Report No.: INDIA-val/452.49/2012	Subject Group: CDM
Project title: Grid connected solar PV power plant in Jodhpur, Rajasthan	
Work carried out by: Anurag Juyal – Team Leader Rakesh Tripathi – Team Member Nazia Naqvi (Observer)	
Internal Technical Review carried out by:  H.B. Muralidhar – Operations Manager	
Date of this revision: 12/09/2012	Rev. No.: 02
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Work approved by:



Mr. Flavio Gomes

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Abbreviations

BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEA	Central Electricity Authority
CERs	Certified Emission Reductions
CL	Clarification Request
CM	Combined Margin
CO ₂	Carbon Dioxide
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Desk Review
DVR	Detailed Validation Report
EB	Executive Board
EF	Emission Factor
EIA	Environment Impact Assessment
FAR	Forward Action Request
GHGs	Green House Gas(es)
HCA	Host Country Approval
ITR	Internal Technical Review
MP	Monitoring Plan
MW	Mega watt
NCDMA	National CDM Authority



NEWNE	Northern, Eastern, Western, and North-Eastern regional grids
NVVN	NTPC Vidyut Vyapar Nigam Limited
NWEPL	Northwest Energy Private Limited
OM	Operating margin
O & M	Operation and Maintenance
PDD	Project Design Document
PLF	Plant Load Factor
PPA	Power Purchase Agreement
PV	Photo Voltaic
REF	Reference
RI	Report Issuance
SV	Site Visit
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention for Climate Change
VVM	Validation and Verification Manual



1 INTRODUCTION

Northwest Energy Private Limited has commissioned Bureau Veritas Certification to validate its CDM project “Grid connected solar PV power plant in Jodhpur, Rajasthan” (hereafter called “the project”) at Village-Rawra, Tehsil - Phalodi of Jodhpur district in the state of Rajasthan, India.

This report summarizes the findings of the validation of the project, performed on the basis of UNFCCC criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

1.1 Objective

The validation serves as project design verification and is a requirement of all projects. The validation is an independent third party assessment of the project design. In particular, the project's baseline, the monitoring plan (MP), and the project's compliance with relevant UNFCCC and host country 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 a requirement for all CDM projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of certified emission reductions (CERs).

UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM rules and modalities and the subsequent decisions by the CDM Executive Board, as well as the host country criteria.

1.2 Scope

The validation scope is defined as an independent and objective review of the project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations.

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

1.3 Validation team

The validation team consists of the following personnel:

FUNCTION	NAME	CODE HOLDER*	TASK PERFORMED
Lead Verifier	Anurag Juyal	☒ Yes ☐ No	☒ DR ☐ SV ☒ RI
Verifier	Rakesh Tripathi	☒ Yes ☐ No	☒ DR ☒ SV ☐ RI
Observer	Nazia Naqvi	☐ Yes ☐ No	☒ DR ☒ SV ☐ RI



Technical Specialist	Not applicable	☐ Yes ☐ No	☐ DR ☐ SV ☐ RI
Financial Specialist	Not applicable	☐ Yes ☐ No	☐ DR ☐ SV ☐ RI
Internal Technical Reviewer (ITR)	H.B. Muralidhar	☒ Yes ☐ No	☒ DR ☐ SV ☐ RI
Specialist supporting ITR	Not applicable	☐ Yes ☐ No	☐ DR ☐ SV ☐ RI

*DR = Document Review; SV = Site Visit; RI = Report issuance

2 METHODOLOGY

The overall validation, from Contract Review to Validation Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

In order to ensure transparency, a validation protocol was customized for the project, according to the version 01.2 of the Clean Development Mechanism Validation and Verification Manual, issued by the Executive Board at its 55th meeting on 30/07/2010. The protocol shows, in a transparent manner, criteria (requirements), means of validation and the results from validating the identified criteria. The validation protocol serves the following purposes:

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

The completed validation protocol is enclosed in Appendix A to this report.

2.1 Review of Documents

The Project Design Document (PDD) submitted by Northwest Energy Private Limited and additional background documents related to the project design and baseline, i.e. country Law, Guidelines for Completing the Project Design Document (CDM-SSC-PDD), Approved methodology, Kyoto Protocol, Clarifications on Validation Requirements to be Checked by a Designated Operational Entity were reviewed.

To address Bureau Veritas Certification corrective action and clarification requests, Northwest Energy Private Limited revised the PDD and resubmitted it on 24/07/2012.



The validation findings presented in this report relate to the project as described in the PDD version 02.

2.2 Follow-up Interviews

On 12/06/2012 Bureau Veritas Certification performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of Northwest Energy Private Limited (Project Participant), KPMG (CDM Consultant) and Local Stakeholders were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
Northwest Energy Private Limited	➤ Project design and implementation ➤ Technical equipment and operation ➤ Compliance with National Laws and regulations ➤ CDM consideration
LOCAL Stakeholder	➤ Views and concerns about the project activity. ➤ Confirmation of local stakeholder's meeting conducted by Northwest Energy Private Limited
KPMG	➤ Technical equipment and operation ➤ Baseline determination ➤ Monitoring plan ➤ GHG calculation ➤ Environmental Impacts

2.3 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the validation is to raise the requests for corrective actions and clarification and any other outstanding issues that needed to be clarified for Bureau Veritas Certification positive conclusion on the project design.

Corrective Action Requests (CAR) is issued, where:

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

The validation team may also use the term Clarification Request (CL), if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.



To guarantee the transparency of the validation process, the concerns raised are documented in more detail in the validation protocol in Appendix A.

2.4 Internal Technical Review

The validation report underwent an Internal Technical Review (ITR) before requesting registration of the project activity.

The ITR is an independent process performed to examine thoroughly that the process of validation has been carried out in conformance with the requirements of the validation scheme as well as internal Bureau Veritas Certification procedures.

The Lead Verifier provides a copy of the validation report to the reviewer, including any necessary validation documentation. The reviewer reviews the submitted documentation for conformance with the validation scheme. This will be a comprehensive review of all documentation generated during the validation process.

When performing an Internal Technical Review, the reviewer ensures that:

The validation activity has been performed by the team by exercising utmost diligence and complete adherence to the CDM rules and requirements.

The review encompasses all aspects related to the project which includes project design, baseline, additionality, monitoring plans and emission reduction calculations, internal quality assurance systems of the project participant as well as the project activity, review of the stakeholder comments and responses, closure of CARs, CLs and FARs during the validation exercise, review of sample documents.

The reviewer compiles clarification questions for the Lead Verifier and Validation Team and discusses these matters with Lead Verifier.

After the agreement of the responses on the 'Clarification Request' from the Lead Verifier as well as the PP(s) the finalized validation report is accepted for further processing such as uploading on the UNFCCC webpage.

3 VALIDATION CONCLUSIONS

In the following sections, the conclusions of the validation are stated.

The findings from the desk review of the original project design documents and the findings from interviews during the follow up visit are described in the Validation Protocol in Appendix A.



The Clarification and Corrective Action Requests are stated, where applicable, in the following sections and are further documented in the Validation Protocol in Appendix A. The validation of the Project resulted in 05 Corrective Action Requests (CARs) and 08 Clarification Requests (CLs).

The CARs and CLs were closed based on adequate responses from the Project Participant(s) which meet the applicable requirements. They have been reassessed before their formal acceptance and closure.

The number between brackets at the end of each section correspond to the VVM paragraph.

3.1 Approval (49-50)

India is the only party involved in the project activity at this stage and is the host party. The Project participant Northwest Energy Private Limited, which is a private entity, has obtained an approval (Letter no. 4/6/2012-CCC dated 19th April 2012 (Ref P/1/) from DNA of India. The validation team does not doubt the authenticity of the letter of approval as it has been issued on the official letterhead of Ministry of Environment and Forest (Government of India) and signed by Deputy Secretary Climate Change. The validation team confirmed the authenticity of the approval by cross-checking it with the original HCA. The letter of approval clearly states that Government of India has ratified the Kyoto Protocol in August 2002 and the approval is for voluntary participation in CDM project activity. The project title stated in the letter of approval refers to the precise proposed CDM project activity title in the PDD being submitted for registration. Also, the letter of approval mentions that project contributes to the sustainable development in India. The letter is unconditional with respect to the party to the Kyoto Protocol, voluntary participation, contribution to sustainable development and title of project activity. The validation team confirms that the host country approval letter is in accordance with paragraphs 45 – 48 of VVM version 1.2.

At the time of the issuance of the DVR, the host country approval letter was not available to the project participant and hence, the validation team raised CL 1. In response to CL 1, the Project Participant provided a copy of the Host Country Approval Letter issued by Ministry of Environment and Forest (Government of India) which was cross-checked with its original and hence CL 1 was closed by the validation team.

3.2 Participation (54)

The host party for this project is India. India has ratified the Kyoto Protocol on 26th Aug 2002. This was checked from UNFCCC website <http://maindb.unfccc.int/public/country.pl?country=IN>.



The project design document has mentioned Northwest Energy Private Limited as project participant and this participation is approved by DNA approval letter (Letter no. 4/6/2012-CCC dated 19th April 2012 (Ref P/1/)). Hence, the validation team confirms that the participation for project participant has been approved by a Party of the Kyoto Protocol. The validation team does not doubt the authenticity of the letter of approval as it has been issued on the official letterhead of Ministry of Environment and Forest (Government of India) and signed by Deputy Secretary Climate Change. The validation team confirmed the authenticity of the approval by cross-checking it with the original copy of the letter of Approval. The letter of approval clearly states that India has ratified the Kyoto Protocol and the approval is for voluntary participation in CDM project activity. Also, the letter of approval mentions that project contributes to sustainable development.

3.3 Project design document (57)

In line with the requirement of Para 56 of VVM, Version 1.2 (Ref B/1/), the validation team reviewed the web hosted PDD (Ref P/2/) against the CDM EB guidance documents for completion of simplified PDD. The validation team validated that the Project Design Document is based on the currently valid CDM-SSC-PDD template.

While reviewing the web hosted PDD, the validation team observed erroneous details in various sections of the web hosted PDD. The validation team rose following corrective action requests and clarification requests corresponding to the relevant sections of the PDD and guidance for completing SSC CDM PDD.

CAR 1	Justification for acceptance
The methodological choice with respect to Para 12 of the applied methodology AMS-I.D. Version 17 was not clear from section B.6.1 of the web-hosted PDD and hence CAR 1 was raised.	In response to CAR 1, the PP revised the PDD and clearly stated that the emission factor has been calculated as per para 12(a) i.e. as per combined margin approach and hence CAR 1 was closed.
CAR 2	Justification for acceptance
The start date of the proposed CDM project activity stated in section C.1.1 of the webhosted PDD was not in line with Glossary of CDM terms and hence CAR 2 was raised.	In response, the PP revised the start date of the project activity in accordance with the date of first purchase order placed to technology supplier and hence CAR 2 was closed.
CAR 3	Justification for acceptance
The maximum length of first crediting period and its renewal frequency was	In response, the PP revised the PDD and clearly stated that the

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not clear from section C.2.1 of the webhosted PDD and hence CAR 3 was raised.	project activity has opted for a 7 year renewable crediting period which can be renewed twice and hence CAR 3 was closed.
CAR 5	Justification for acceptance
The proceeding of the stakeholder's meeting was not clear with respect to information provided in section E.1 of the PDD and hence CAR 5 was raised.	In response, the PP revised the PDD and included the proceedings of the stakeholder's meeting in the PDD and hence CAR 5 was closed.

The assessment of the validation team on

- a) The project activity is a grid connected solar PV plant and
- b) The rated capacity of the project does not exceed 15 MW and the same has been detailed under section 3.5 (project description) of the validation report. The assessment on de-bundling has been discussed below:

De-bundling:

It was noted during the site visit and during interview with the stakeholders and by referring to the UNFCCC website that there is no registered CDM project activity or no application to register any CDM project activity within one kilometer of the proposed project activity by the project participant in previous two years. Above validation is as per Guidelines on Assessment of De-bundling for SSC project activities in EB 54, Annex 13.

Following analysis was performed in order to validate the above-statement:

1. The validation team checked CDM Pipeline overview database published by the UNEP Risoe Centre. This is a comprehensive database on the CDM project activities compiled by The UNEP Risoe Centre on Energy, Climate and Sustainable Development (URC)¹. The validation team confirms that there is no registered CDM project/application to register any CDM project by the project participant.
2. The validation team further confirms that this is the first application for CDM registration requested by the project participant. Even if it happens that new projects of similar technology are planned for implementation by the project participant within one kilometer boundary of the project activity, the de-bundling guidance will become applicable only to such future projects and not the project

¹ <http://uneprisoe.org/>



activity as de-bundling guidance requires having a registered project or application to register CDM project by the same project participant in the same project category in previous two years.

The assessment presented above confirms that the project activity is not a de-bundled project activity of a large project activity in accordance with the rules defined in Appendix C of Annex II to Decision 4/COP.1 and EB 54, Annex 13.

The validation team confirms that revised PDD, version 02 dated 24/07/2012 (Ref P/3/) complies with the latest forms of the guidance documents for completion of PDD and the information therein is in accordance with the applicable guidance document, and thus complying with para 57 of VVM, version 1.2.

Thus, the validation team hereby confirms that the PDD complies with the latest form of the guidance documents for completion of PDD. The PDD is as per Guidelines for Completing the Project Design Document (CDM-SSC-PDD) and the relevant forms.

3.4 Changes in the Project Activity

There are no changes in the capacity of the project as observed during the on-site visit. The implementation of the proposed CDM project activity along with its capacity observed during site visit is consistent with the project description provided in the webhosted PDD. The total capacity of the project activity is 5 MW.

The revised PDD version 02 has the following major changes with respect to initial version of the PDD, which was webhosted for Global Stakeholders' Consultation.

- Project boundary diagram has been revised in the PDD to transparently describe the monitoring locations.
- The start date of the proposed CDM project activity has been corrected in the Section B.5 and C.1.1 in line with the Glossary of terms of CDM.
- Emission factor calculation has been corrected in accordance with CEA database version 7 in place of version 6 since CEA database version 7 was available at the time of PDD webhosting. Accordingly the value of grid emission factor has been changed to 0.9528 tCO₂/MWh from 0.9488 tCO₂/MWh in the webhosted PDD.
- Monitoring plan has been revised in section B.7.1 and B.7.2 of the PDD in accordance with the actual monitoring practice followed on-site.



3.5 Project description (64)

Bureau Veritas Certification recognizes the initiative of the Project Participant in assisting the host country fulfill its goals of promoting sustainable development. The project activity involves the installation and operation of a grid connected 5 MW Solar photovoltaic technology based power plant in Village-Rawra, Tehsil-Phalodi of Jodhpur district in the state of Rajasthan, India. The project has been implemented under the **Jawaharlal Nehru National Solar Mission Phase-I** (also known as the National Solar Mission) which is a major initiative of the Government of India and State Governments to promote ecologically sustainable growth while addressing India's energy security challenges. It also constitute a major contribution by India to the global effort to meet the challenges of climate change. The first phase of this mission aims to commission 1000 MW of grid-connected solar power projects by 2013. The implementation of this phase is in hands of a subsidiary of National Thermal Power Corporation, the largest power producer in India. The subsidiary, NTPC Vidyut Vyapar Nigam Ltd (NVVN) laid out guidelines for selection of developers for commissioning grid connected solar power projects in India. NVVN will also sign power purchase agreements with the developers. Since NVVN is not a utility, it will sell purchased power to different state utilities via separate agreements.

This project activity generates electricity using solar energy which is a renewable source of energy, and does not result in any net greenhouse gas (GHG) emissions. Thus, this project leads to reduction in GHG emissions that would otherwise have occurred due to operation of conventional fossil fuel based sources in the NEWNE regional grid.

In order to validate completeness and accuracy of project description, on-site visit was performed on 12/06/2012 to the project site at Village-Rawra, Tehsil - Phalodi of Jodhpur district in the state of Rajasthan, India. The major equipment installed as a part of the project activity as observed during the on-site visit and document review is as follows –

Sr. no.	Specifications	Details		Cross-checking document
1	Project technology	Thin Film	Thin Film	Commissioning certificate by EPC Contractor (Ref P/4/)
2	Make	Solar frontier K.K	Solar frontier K.K	Purchase Order (Ref P/5/)



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3	Model of PV modules	SF 145 L	SF 155 L	Purchase Order (Ref P/5/)
4	Capacity of each photovoltaic module	145 Wp	155 Wp	Commissioning certificate by EPC Contractor (Ref P/4/)
5	Total number of photovoltaic module	7584	28384	Commissioning certificate by EPC Contractor (Ref P/4/)
6	Inverter make	Power One		Commissioning certificate by EPC Contractor (Ref P/4/)
7	Number of inverters	10		Commissioning certificate by EPC Contractor (Ref P/4/)

The entire power generated by the project activity will be exported to NTPC Vidyut Vyapar Nigam Limited (NVVN) which falls under NEWNE grid of India. The grid connectivity was verified by means of the following:

- Power purchase agreement signed with NTPC Vidyut Vyapar Nigam Limited (Ref P/6/).
- Actual observations at the site to confirm the connectivity of the project to the grid.

The project description provided in the PDD was not complete and the following clarification was raised:

CL 3	Justification for acceptance
The parameters of the solar panels i.e. nominal power was not consistent with the purchase order submitted by the project participant.	In response, the PP revised the PDD and included the precise details of solar panels as per actual commissioning and purchase order and hence CL 3



Also the number of the PV modules being commissioned under each nominal power class was not clear from section A.4.2 of the web-hosted PDD and hence CL 3 was raised.	was closed.
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Based on site visit and review of purchase order, commissioning certificate etc. the validation team hereby confirms that the project description in PDD being submitted for registration (Ref P/3/) is accurate and complete in all respects and that there are no changes to the project activity/design or boundary as compared to the webhosted PDD (Ref P/2/).

3.6 Baseline and monitoring methodology

3.6.1 General requirement (76-77)

The steps taken to assess the relevant information contained in the PDD against each applicability condition are described below.

Applicability condition (1): *This methodology comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass:*

- (a) *Supplying electricity to a national or a regional grid; or***
(b) *Supplying electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling.*

Steps taken for assessment – The project activity is a solar PV power project and the same was verified through physical on-site visit. The project activity displaces grid electricity. Grid connectivity was verified through on-site visit and contractual agreement for sale of electricity with the state electricity board through review of the Power Purchase Agreement (PPA) signed with NTPC Vidyut Vyapar Nigam Limited (Ref P/6/).

Applicability condition (2): *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 below.*

Table 2: *Applicability of AMS-I.D, AMS-I.F and AMS-I.A based on project types*

	Project type	AMS-I.A	AMS-I.D	AMS-I.F
1	Project supplies electricity to a national/regional grid		√	



2	<i>Project displaces grid electricity consumption (e.g. grid import) and/or captive fossil fuel electricity generation at the user end (excess electricity may be supplied to a grid)</i>			✓
3	<i>Project supplies electricity to an identified consumer facility via national/regional grid (through a contractual arrangement such as wheeling)</i>		✓	
4	<i>Project supplies electricity to a mini grid system where in the baseline all generators use exclusively fuel oil and/or diesel fuel</i>			✓
5	<i>Project supplies electricity to household users (included in the project boundary) located in off grid areas</i>	✓		

Steps taken for assessment – Grid connectivity was verified through on-site visit and contractual agreement for sale of electricity through review of Power Purchase Agreement signed with NTPC Vidyut Vyapar Nigam Limited (Ref P/6/).

Since the project activity conforms to option 1 above, hence the methodology AMS-I.D, version 17 is applicable in the project context.

Applicability condition (3): *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).

Steps taken for assessment – The project is a Greenfield plant and involves the installation and operation of new solar PV modules. The same was observed during on-site visit and cross-checked with the Purchase Order (Ref P/5/).

Applicability condition (4): Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology:

- ***The project activity is implemented in an existing reservoir with no change in the volume of reservoir;***
- ***The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the Project Emissions section, is greater than 4 W/m²;***
- ***The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the Project Emissions section, is greater than 4 W/m².***

Steps taken for assessment – The project is a solar PV power project hence this condition is not applicable in the project context.

Applicability condition (5): 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.

Steps taken for assessment – The project activity is a solar PV power project and does not involve any non-renewable component. The total installed capacity of the project activity is 5 MW (AC) and 5.5 MW (DC). The same has been observed during the on-site visit and through document review viz. commissioning certificate (Ref P/4/) and Power Purchase Agreement (Ref P/6/). The project activity has a rated capacity of 5 MW (AC) which is less than the limiting capacity of 15 MW for small scale CDM project activity.

Applicability condition (6): Combined heat and power (co-generation) systems are not eligible under this category.

Steps taken for assessment – The project activity involves only electricity generation utilizing solar energy and co-generation is not possible in the project activity. Hence this condition is not applicable in the project context.



Applicability condition (7): *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.*

Steps taken for assessment – The capacity of the project is 5 MW (AC) and the same has been cross-checked with the commissioning certificate (Ref P/4/) and the Power Purchase Agreement (Ref P/6/) and also observed during the on-site visit. The project activity is installed at a site where there was no power generation prior to the implementation of the project activity and the same has been observed during the on-site visit and cross-checked by interviewing stakeholders during the on-site visit.

Applicability condition (8): *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.*

Steps taken for assessment – The project is a Greenfield field project activity as described above and involves the installation of new solar PV modules. Hence this condition does not apply in the project context.

The validation team hereby confirms that the selected baseline and monitoring methodology AMS-I.D, version 17 (Ref B/2/) is previously approved by the CDM Executive Board, and is applicable to the project activity, which, complies with all the applicability conditions therein.

As stated above, the project capacity is 5 MW (AC), which is less than the limit of 15 MW as specified in General Guidance to SSC CDM methodologies, Version 18 (Ref B/3/). As explained in section 3.8 below, data storage will be stored electronically for a period of two years from the crediting period as stated in general guidance to SSC CDM methodologies. The small-scale methodology AMS-I.D, version 17 is applied in conjunction with General Guidance to SSC CDM methodologies, Version 18 (Ref B/3/).

The validation team hereby confirms that, as a result of the implementation of the proposed CDM project activity there are no greenhouse gas emissions occurring within the proposed CDM project activity boundary which are not addressed by the applied methodology and which are expected to contribute more than 1% of the overall expected average annual emissions reductions.



3.6.2 Project boundary (80)

The spatial extent of the project boundary is assessed through the description in the PDD and the grid structure in India as known from the official data available from the Central Electricity Authority, CEA (Ref P/7/). The boundary of the project activity therefore includes the project power plant and all power plants connected physically to the NEWNE grid.

The electricity imported by the project activity is accounted in the calculation of the net electricity exported by the project activity viz. $EG_{BL,y}$. There are no other sources of project emissions. Hence, in line with the methodology, project participant has considered project emissions as zero for renewable power generation. Further, the project does not involve any transfer of equipment from or to the project activity and thus there is no leakage accountable to the project activity.

Site visit was performed on 12/06/2012 to the project site at Village-Rawra, Tehsil-Phalodi of Jodhpur district in the state of Rajasthan, India to verify the project details as mentioned in the webhosted PDD (Ref P/2/). The project design is sound and the geographical (Village-Rawra, Tehsil-Phalodi of Jodhpur district in the state of Rajasthan, India) boundaries of the project and temporal (25 years) boundaries of the project are clearly defined. Life of the project activity equipment is 25 years. The commissioning certificate for the project (Ref P/4/) was also reviewed and the location details in PDD are as per commissioning certificate.

The project boundary diagram provided in the PDD was not complete and the following clarification was raised:

CL 4	Justification for acceptance
The schematic project boundary diagram provided was not clear with respect to the electricity monitoring locations and hence CL 4 was raised.	In response, the PP revised the PDD and included the electricity monitoring locations in the project boundary diagram which was also in accordance with site visit observations and hence CL 4 was closed.

The validation team confirms that the only greenhouse gas relevant to the project activity is CO₂. This GHG is addressed by the applied methodology. Based on the above assessment, the validation team hereby confirms that the identified boundary and the selected sources and gases are justified for the project activity.

3.6.3 Baseline identification (87-88)

The steps taken to assess the requirement given in paragraph 81 and 82 of the VVM are described below:

The methodology AMS I.D. ver. 17 prescribes baseline for the project activity. The project activity is the installation of a new grid-connected renewable power plant/unit. Hence, 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*. The same is in line with paragraph 10 of AMS I.D. ver. 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.

$$BE_y = EG_{BL,y} * EF_{CO_2,grid,y}$$

Where:

BE_y = Baseline Emissions in year y (t CO₂)
 $EG_{BL,y}$ = Quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in year y (MWh)
 $EF_{CO_2,grid,y}$ = CO₂ Emission Factor of the grid in year y (t CO₂/MWh)

The Emission Factor can be calculated in a transparent and conservative manner as follows:

a) Combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM) according to the procedures prescribed in the approved methodology "Tool to calculate the emission factor for an electricity system".

OR

b) The weighted average emissions (in tCO₂/MWh) of the current generation mix.

In the PDD, combined margin is calculated as per Tools to calculate emission factor for an electricity system (Ref B/4/).

The project participant has used the official published data on operating and build margin emission factors and calculated the combined margin emission factor as per version 2.2.1 of the Tool to calculate emission factor. The value of the data used is published by Central Electricity



Authority, CEA (version 7) who is the sole authority for the publication of such data in India. The calculation in CEA database version 7 is also in accordance with version 2.2.1 of the Tool to calculate emission factor. It was noted by the validation team that version 7 of the CEA database has been used by the Project Participant.

Project participant has applied weight factors for the OM and BM [75% & 25% respectively] as specified in the tool to calculate emission factor for combined margin option. Accordingly, the combined margin emission factor value for NEWNE grid is calculated as 0.9528 tCO₂/MWh. Validation team agrees to this emission factor since it is based on the official background data published by CEA (Central Electricity Authority) which is an official central government agency. The validation team further notes that the emission factors are not provided by DNA but by a competent authority (CEA). The PP had used the older version of CEA database i.e. version 6 for calculation of emission factor at the time of PDD webhosting and hence CL 5 was raised. In response, the PP revised the emission factor calculation in line with version 07 of CEA database since it was available at the time of PDD webhosting and hence CL 5 was closed.

Based on the above assessment, the DOE hereby confirms that:

- (a) All the assumptions and data used by the project participants are listed in the PDD, including their references and sources;
- (b) All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the PDD;
- (c) Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable;
- (d) Relevant national and/or sectoral policies and circumstances are considered and listed in the PDD;
- (e) The approved baseline methodology has been correctly applied to identify the most reasonable baseline scenario and the identified baseline scenario reasonably represents what would occur in the absence of the proposed CDM project activity.

It is observed that the selected baseline scenario is in line with the selected approved methodology AMS I.D. ver. 17. Validation team therefore confirms that the selected baseline scenario reasonably represents the anthropogenic emissions by sources of GHGs that would occur in the absence of the proposed CDM project activity

3.6.4 Algorithms and/or formulae used to determine emission reductions (92-93)

The steps taken to assess the requirement outlined in paragraph 89 of the VVM are described below:



The project participant has used the algorithms and formulae in accordance with the methodology applied viz. AMS-I.D, Version 17 and *Tool to calculate emission factor for an electricity system*. The detailed algorithms and/or formulae used in the calculation of baseline emissions and emission reductions are explained in section B.6.1 of the PDD. The validation team confirms that the formulae have been applied correctly in line with the applied methodology AMS-I.D, Version 17.

Baseline emissions

As per the requirement of applied methodology AMS-I.D, Version 17, project participant has calculated the baseline emissions by following Para 11 of methodology i.e. electricity supply by the project activity multiplied by the combined margin emission factor of NEWNE grid, as reported in section 3.6.3 above. The detailed calculations for the same have been provided under section B.6.3 of the PDD.

Project Emissions

The project activity involves the electricity generation by a “renewable source of energy” and hence in accordance with Para 20 of the methodology AMS-I.D, Version 17, the project emissions are considered as zero. The electricity imported by the project activity has, however, been accounted for by subtracting the import values from gross electricity supplied to the grid. The values of electricity generation used for the calculation of emission reductions therefore represent the “net” electricity fed by the project activity to the grid. This is also in line with the requirement of the methodology.

Leakage

With reference to Para 22 of methodology AMS-I.D, version 17, project activity does not lead to any leakage emissions since there was no transfer of equipment to or from the project activity. Hence the leakage from project activity is considered to be zero.

Emission Reductions

As per the requirement of applied methodology AMS I.D., Version 17, project participant has calculated the emission reductions as per Para 23 of methodology. Algorithm and formulae has been included in B.6.1 of the PDD and detailed calculations under section B.6.3 of the PDD.

Validation team assessed the calculations of estimated emission reductions as provided by project participant in a spreadsheet (Ref P/8/). The assumptions in this spreadsheet were validated as follows -

<i>Baseline Emissions</i>		
Parameter,	Source of	Validation justification

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Value	information	
Project Capacity (in MW) = 5	Commissioning certificate (Ref P/4/)	The project capacity is taken as 5 MW from the commissioning certificate (Ref P/4/).
PLF (in %) 20.47%	PLF Assessment Report prepared by Suncraft Energy Private Limited (Ref P/9/)	The PLF value was validated from the PLF assessment report prepared by Suncraft Energy Private Limited. The validation team agrees that this assumption is reasonable as a value selected for emission reduction calculations since it based on third party assessment. PLF selected is in line with the Guidelines for the reporting and validation of PLF's (Ref B/5/), EB 48 Annex 11 which stipulates that Plant load factors shall be defined ex-ante based on "<i>The plant load factor determined by a third party contracted by the project participants (e.g. an engineering company)</i>". Since the PLF is taken from PLF Assessment Report which is in line EB 48, Annex 11, the same is accepted by the validation team. <u>Cross check</u> – The validation team also cross checked the PLF value from the Rajasthan Electricity Regulatory Commission's (RERC) tariff order dated 25-05-2010 (Ref P/10/) which stipulated the PLF value for Solar PV projects as 20.5%. <i>Hence the validation team concluded that the PLF value of 20.47% used for the purpose of computing electricity generation would lead to a conservative estimate of emission reductions.</i>
Grid	CEA database ver. 7	CEA database is an official



EF(tCO ₂ /MWh) = 0.9528	(Ref P/7/)	source of data and hence acceptable.
Project Emissions		
Not applicable since there are no emissions attributed to the project activity inside the project boundary.		
Leakage		
Not applicable since there are no emissions attributed to the project activity outside the project boundary.		

The estimated annual average of approximately 8542 tCO₂e of emission reductions over the entire crediting period represents a reasonable estimation using the assumptions considered by the project participant. All the assumptions for the ex-ante estimation of emission reductions have been considered by the project participant based on official data source in line with relevant EB guidelines. The validation team confirms that the estimates of baseline emissions can be replicated using the information provided. It also can be verified using the spreadsheet (Ref P/8/) for calculations of emission reductions.

Based on the above assessment, the validation team hereby confirms that:

- (a) All assumptions and data used by the project participants are listed in the PDD, including their references and sources;
- (b) All documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PDD;
- (c) All values used in the PDD are considered reasonable in the context of the proposed CDM project activity;
- (d) The baseline methodology has been applied correctly to calculate baseline emissions and emission reductions;
- (e) All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PDD.

3.7 Additionality of a project activity (97)

The steps taken and sources of information used, to cross-check the information contained in the PDD on this matter are described below:

The steps taken by the validation team to assess the additionality of the project have been detailed in Sections 3.7.1 through 3.7.5 below.

3.7.1 Prior consideration of the clean development mechanism (104)

Project participant provided a copy of the purchase order (Ref P/5/) placed to technology supplier dated 12th October, 2011. By reviewing all other documents related to project implementation, it was observed that there was no other real action before the purchase order was placed; and hence the validation team accepted the date of placement of the purchase



order as starting date for the project activity. Accordingly, 12th October, 2011 which is the date of the purchase order, is accepted as the starting date of the project activity. Also, since the project activity start date is 12th October, 2011; hence as per EB 62 Annex 13 (Ref B/6/), the following condition applies:

Project activities with a starting date on or after 2 August 2008, the project participant must inform a Host Party designated national authority (DNA) and the UNFCCC secretariat in writing of the commencement of the project activity and of their intention to seek CDM status. Such notification must be made within six months of the project activity start date and shall contain the precise geographical location and a brief description of the proposed project activity, using the standardized form F-CDM-Prior Consideration.

The project participant informed UNFCCC regarding commencement of the project activity and of their intention to seek CDM status on 16th December 2011. The project participant provided copy of F-CDM-Prior consideration dated 6th December 2011. The validation team also checked UNFCCC website and noted that the project activity is stated in prior consideration section and date received is shown as 16th Dec 2011. Thus it was confirmed the project participant had informed UNFCCC (i.e. on 16th December 2011) within six months of the start date of the project activity i.e. 12th October, 2011.

The project participant had also informed Indian DNA (host party DNA) regarding commencement of the project activity and of their intention to seek CDM status on 16th December 2011. The project participant provided copy of F-CDM-Prior consideration dated 6th December 2011. The validation team also cross-checked the email acknowledgement of the intimation sent by PP to the Indian DNA dated 19th December 2011. Thus it was confirmed the project participant had informed Indian DNA (i.e. on 16th December 2011) within six months of the start date of the project activity i.e. 12th October, 2011.

The assessment of the Prior Consideration of the project activity "Grid connected solar PV power plant in Jodhpur, Rajasthan" is conducted by verifying the information submitted by the PP (Copy of email acknowledgement received from Indian DNA dated 19/12/2011) and consulting the UNFCCC website, whereby the validation team confirms that the UNFCCC secretariat and the Indian DNA received the intimation sent by Northwest Energy Private Limited on 16th December 2011.

Based on the above assessment, the validation team hereby confirms that the proposed CDM project activity complies with the requirements of the latest version of the Guidance on prior consideration of CDM.



3.7.1.1 Historical information on project timeline

The project start date is 12th October, 2011 and in line with EB 62 Annex 13, the PP had informed UNFCCC and the host party DNA regarding the commencement of the project activity and of their intention to seek CDM status within 6 months of the project start date. Hence, historical information on project timeline with respect to any real action taken towards securing CDM status prior to start date of project activity is not applicable.

3.7.2 Identification of alternatives (107)

The approved methodology AMS-I.D, version 17 prescribes the baseline scenario, hence as per para 105 of VVM manual, version 1.2 no further analysis on identification of alternatives is required.

3.7.3 Investment analysis (114)

Being a small scale CDM project activity, the project participant has selected Attachment A to Appendix B of Simplified modalities and procedures for small scale CDM project activities (Ref B/7/) for demonstration of additionality. The same guidelines specify the following criteria:

The positive list of grid-connected 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:

- (a) Solar technologies (photovoltaic and solar thermal electricity generation);*
- (b) Off-shore wind technologies;*
- (c) Marine technologies (wave, tidal).*

Since the project activity is a 5 MW grid-connected solar PV power project, hence it falls under type (a) above and is therefore exempted from demonstration of additionality.

3.7.4 Barrier analysis (118)

As per Attachment A to Appendix B, *The positive list of grid-connected 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:*

- (a) Solar technologies (photovoltaic and solar thermal electricity generation);*
- (b) Off-shore wind technologies;*

(c) *Marine technologies (wave, tidal).*

Since the project activity is a 5 MW grid-connected solar PV power project, hence it falls under type (a) above and is therefore exempted from demonstration of additionality.

3.7.5 Common practice analysis (121)

As per Attachment A to Appendix B, *The positive list of grid-connected 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:*

- (a) *Solar technologies (photovoltaic and solar thermal electricity generation);*
- (b) *Off-shore wind technologies;*
- (c) *Marine technologies (wave, tidal).*

Since the project activity is a 5 MW grid-connected solar PV power project, hence it falls under type (a) above and is therefore exempted from demonstration of additionality.

3.8 Monitoring plan (124)

The PDD includes a monitoring plan based on the approved monitoring methodology AMS-I.D, version 17.

Compliance of monitoring plan with monitoring methodology

Paragraph 24 of the methodology AMS-I.D, version 17 lists out the parameters required to be monitored.

The list of parameters identified in the PDD and the source documents reviewed for the same is mentioned below:

Parameters determined ex-ante for the entire crediting period

Sr. no.	Parameter	Value/ Data unit	Source document
1.	Simple operating margin emission factor ($EF_{grid,OM,y}$)	0.9842 tCO ₂ e/MWh	CEA CO ₂ baseline database version 07. This is an official source of data and hence acceptable.
2.	Build margin emission factor ($EF_{grid,BM,y}$)	0.8588 tCO ₂ e/MWh	CEA CO ₂ baseline database version 07. This is an official source of data and hence acceptable.

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3.	CO2 emission factor of NEWNE grid ($EF_{CO_2, grid, y}$)	0.9528 tCO_2e/MWh	Calculated as per Tool to calculate emission factor for an electricity system (Ref B/4/)
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The validation team has verified the above value considered against the sources and concludes that the data used are appropriate and conservative in the project context.

Parameters monitored ex-post

Sr. no.	Parameter included in the monitoring plan of the PDD	Corresponding parameter in the monitoring plan of the methodology
1.	Quantity of electricity export by the project (NWEPL) to the grid in year y ($EG_{NWEPL, export, y}$)	The project participant has included this parameter as "Quantity of electricity export by the project (NWEPL) to the grid in year y ($EG_{NWEPL, export, y}$)" in section B.7.1 of the PDD. It was observed during the site visit that this data is monitored continuously using ABT complaint meters (Main meter and check meter). These meters belong exclusively to NWEPL and are installed at the transformer yard of the VREPL plant (Non PP plant) and continuously monitor the grid electricity export by the project activity. On a particular day of a month, joint meter reading is also taken at this monitoring point for the grid electricity export and recorded in the Monthly Generation Record. The joint meter reading is taken in the presence of representatives of state utility and PP. All the meters having an accuracy class of 0.2s are sealed by the State utility and are in control of the State utility. The values in monthly generation records can be cross checked with records of sold electricity (invoices). All the above data will be archived electronically as well as in log books at the NWEPL plant and will be kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later.



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2.	Quantity of electricity import by the NWEPL plant from the grid in year y ($EG_{NWEPL, import, y}$)	The project participant has included this parameter as “Quantity of electricity import by the NWEPL plant (project plant) from the grid in year y ($EG_{NWEPL, import, y}$)” in section B.7.1 of the PDD. It was observed during the site visit that this data is monitored continuously using ABT complaint meters (Main meter and check meter). These meters belong exclusively to NWEPL and are installed at the transformer yard of the VREPL plant (Non PP plant) and continuously monitor the grid electricity import by the project activity. On a particular day of a month, joint meter reading is also taken at this monitoring point for the grid electricity import and recorded in the Monthly Generation Record. The joint meter reading is taken in the presence of representatives of state utility and PP. All the meters having an accuracy class of 0.2s are sealed by the State utility and are in control of the State utility. The values in monthly generation records can be cross checked with records of sold electricity (invoices). All the above data will be archived electronically as well as in log books at the NWEPL plant and will be kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later.
3.	Quantity of electricity export by the VREPL plant to the grid in year y ($EG_{VREPL, export, y}$)	The project participant has included this parameter as “Quantity of electricity export by the VREPL plant (Non-project plant) to the grid in year y ($EG_{VREPL, export, y}$)” in section B.7.1 of the PDD. It was observed during the site visit that this data is monitored continuously using ABT complaint meters (Main meter and check meter). The meters are installed at the transformer yard of the project plant and continuously monitor the grid electricity export.



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		On a particular day of a month, joint meter reading is also taken at this monitoring point for the grid electricity export and recorded in the Monthly Generation Record. The joint meter reading is taken in the presence of representatives of state utility and PP. All the meters having an accuracy class of 0.2s are sealed by the State utility and are in control of the State utility. The values in monthly generation records can be cross checked with records of sold electricity (invoices). All the above data will be archived electronically as well as in log books at the VREPL plant and will be kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later.
4.	Quantity of electricity import by the VREPL plant from the grid in year y ($EG_{VREPL, import, y}$)	The project participant has included this parameter as "Quantity of electricity import by the VREPL plant (Non-project plant) from the grid in year y ($EG_{VREPL, import, y}$)" in section B.7.1 of the PDD. It was observed during the site visit that this data is monitored continuously using ABT complaint meters (Main meter and check meter). The meters are installed at the transformer yard of the project plant and continuously monitor the import of electricity from grid. On a particular day of a month, joint meter reading is also taken at this monitoring point for the grid electricity import and recorded in the Monthly Generation Record. The joint meter reading is taken in the presence of representatives of state utility and PP. All the meters having an accuracy class of 0.2s are sealed by the State utility and are in control of the State utility. The values in monthly generation records can be cross checked with records of sold electricity (invoices). All the above data will be archived electronically as well as in log books at the VREPL plant and will be kept for two years



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		after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later.
5.	Quantity of combined electricity export by the NWEPL plant and VREPL plant to the grid in year y ($EG_{\text{Substation, export, y}}$)	The project participant has included this parameter as "Quantity of combined electricity export by the NWEPL plant and VREPL plant to the grid in year y ($EG_{\text{Substation, export, y}}$)" in section B.7.1 of the PDD. It was observed during the site visit that this data is monitored continuously using ABT complaint meters (Main meter and check meter). The meters are installed at the BAP substation (grid interconnection point) and continuously monitor the combined grid electricity export by NWEPL (Project plant) and VREPL (Non-project plant). On a particular day of a month, joint meter reading is also taken at this monitoring point for the combined grid electricity export and recorded in the Monthly Generation Record. The joint meter reading is taken in the presence of representatives of state utility, NWEPL and VREPL. All the meters having an accuracy class of 0.2s are sealed by the State utility and are in control of the State utility. The values in monthly generation records can be cross checked with records of sold electricity (invoices). All the above data will be archived electronically as well as in log books at the BAP substation and will be kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later.
6.	Quantity of combined electricity import by the NWEPL plant and VREPL plant from the grid in year y ($EG_{\text{Substation, import, y}}$)	The project participant has included this parameter as "Quantity of combined electricity import by the NWEPL plant and VREPL plant from the grid in year y ($EG_{\text{Substation, import, y}}$)" in section B.7.1 of the PDD. It was observed during the site visit that this data is monitored continuously using ABT complaint meters (Main meter and check meter). The meters are installed at the Bap



		substation (grid interconnection point) and continuously monitor the combined grid electricity import by NWEPL (Project plant) and VREPL (Non-project plant). On a particular day of a month, joint meter reading is also taken at this monitoring point for the combined grid electricity import and recorded in the Monthly Generation Record. The joint meter reading is taken in the presence of representatives of state utility, NWEPL and VREPL. All the meters having an accuracy class of 0.2s are sealed by the State utility and are in control of the State utility. The values in monthly generation records can be cross checked with records of sold electricity (invoices). All the above data will be archived electronically as well as in log books at the BAP substation and will be kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later.
7.	Apportioned quantity of electricity exported by the project plant to the grid in year y ($EG_{\text{export},y}$)	The project participant has included this parameter as “Apportioned quantity of electricity exported by the project plant to the grid in year y ($EG_{\text{export},y}$)” in section B.7.1 of the PDD. Since the electricity export measured at the grid interconnection point (BAP substation) represents the electricity supplied by the entire solar farm (including Non-PP solar plant), hence the electricity export measured at the BAP sub-station is apportioned to calculate the electricity export by the project plant. The apportioning procedure is carried out using the following measured values (as reported above) : (1) ($EG_{\text{NWEPL},\text{export},y}$) (2) ($EG_{\text{VREPL},\text{export},y}$) and (3) ($EG_{\text{Substation},\text{export},y}$) $(EG_{\text{export},y}) = (EG_{\text{NWEPL},\text{export},y}) \times (EG_{\text{Substation},\text{export},y})$



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		$\text{export},y) / ((\text{EG}_{\text{NWEPL},\text{export},y}) + (\text{EG}_{\text{VREPL},\text{export},y}))$
8.	Apportioned quantity of electricity import by the project plant from the grid in year y ($\text{EG}_{\text{import},y}$)	The project participant has included this parameter as “Apportioned quantity of electricity import by the project plant from the grid in year y ($\text{EG}_{\text{import},y}$)” in section B.7.1 of the PDD. Since the electricity import measured at the grid interconnection point (BAP substation) represents the electricity imported by the entire solar farm (including Non-PP solar plant), hence the electricity import measured at the BAP sub-station is apportioned to calculate the electricity import by the project plant. The apportioning procedure is carried out using the following measured values (as reported above) : (1) ($\text{EG}_{\text{NWEPL},\text{import},y}$) (2) ($\text{EG}_{\text{VREPL},\text{import},y}$) and (3) ($\text{EG}_{\text{Substation},\text{import},y}$) $(\text{EG}_{\text{import},y}) = (\text{EG}_{\text{NWEPL},\text{import},y}) \times (\text{EG}_{\text{Substation},\text{import},y}) / ((\text{EG}_{\text{NWEPL},\text{import},y}) + (\text{EG}_{\text{VREPL},\text{import},y}))$
9.	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y ($\text{EG}_{\text{BL},y}$)	This parameter is specified in sr. No. 5 of paragraph 24 of the monitoring plan of the methodology. The project participant has included this parameter as “Quantity of net electricity generation supplied by the project plant/unit to the grid in year y ($\text{EG}_{\text{BL},y}$)” in section B.7.1 of the PDD. This parameter is calculated based on the following apportioned values stated above: $\text{EG}_{\text{BL},y} = \text{EG}_{\text{export},y} - \text{EG}_{\text{import},y}$

The validation team hereby confirms that the monitoring plan contains all necessary parameters (as specified above) as required by the monitoring methodology and all the parameters are clearly described in the monitoring plan. The values are considered from relevant sources and the monitoring plan described in the PDD complies with the requirements of the methodology.

Feasibility of project design with monitoring plan

The steps taken to assess whether the monitoring arrangements described in the monitoring plan are feasible within the project design are described below -

(a) On-site visit - The monitoring procedures described in the PDD were cross-checked by conducting an on-site visit on 12/06/2012. Relevant plant personnel were interviewed (list of persons interviewed are detailed below in the report) in-order to understand the project design.

(b) Review of Management and QA/QC procedures – As per the information presented in the PDD submitted for the registration (Ref P/3/) and also observed by conducting interviews on-site, the Project Head and Engineers deputed on-site are responsible for registration, monitoring, measurement, reporting and reviewing of the data and overall project management.

QA/QC procedures are defined in the monitoring plan for the following parameters –

Sr. no.	Parameter	QA/QC procedures as per the monitoring plan
1.	Quantity of electricity export by the project (NWEPL) to the grid in year y ($EG_{NWEPL,export,y}$)	The meters (Main and Check) used for monitoring of this parameter is of 0.2s accuracy class. The meters are under the control of the state utility and are tested/calibrated once in three years. Uncertainty procedure has also been defined for this parameter in the monitoring plan of the PDD.
2.	Quantity of electricity import by the NWEPL plant from the grid in year y ($EG_{NWEPL,import,y}$)	The meters (Main and Check) used for monitoring of this parameter is of 0.2s accuracy class. The meters are under the control of the state utility and are tested/calibrated once in three years. Uncertainty procedure has also been defined for this parameter in the monitoring plan of the PDD.
3.	Quantity of electricity export by the VREPL plant to the grid in year y ($EG_{VREPL,export,y}$)	The meters (Main and Check) used for monitoring of this parameter is of 0.2s accuracy class. The meters are under the control of the state utility and are tested/calibrated once in three years. Uncertainty procedure has also been defined for this parameter in the



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		monitoring plan of the PDD.
4.	Quantity of electricity import by the VREPL plant from the grid in year y ($EG_{VREPL,import,y}$)	The meters (Main and Check) used for monitoring of this parameter is of 0.2s accuracy class. The meters are under the control of the state utility and are tested/calibrated once in three years. Uncertainty procedure has also been defined for this parameter in the monitoring plan of the PDD.
5.	Quantity of combined electricity export by the NWEPL plant and VREPL plant to the grid in year y ($EG_{Substation,export,y}$)	The meters (Main and Check) used for monitoring of this parameter is of 0.2s accuracy class. The meters are under the control of the state utility and are tested/calibrated once in three years. Uncertainty procedure has also been defined for this parameter in the monitoring plan of the PDD.
6.	Quantity of combined electricity import by the NWEPL plant and VREPL plant from the grid in year y ($EG_{Substation,import,y}$)	The meters (Main and Check) used for monitoring of this parameter is of 0.2s accuracy class. The meters are under the control of the state utility and are tested/calibrated once in three years. Uncertainty procedure has also been defined for this parameter in the monitoring plan of the PDD.

While reviewing the, monitoring information included in the PDD, the validation team observed some discrepancies and raised the following corrective actions requests:

CL 7	Justification of Acceptance
Description of measurement methods and procedures and QA/QC procedures were not explained explicitly in section B.7.1 of the PDD and hence CL 7 was raised.	In response, the PP included revised description of the monitoring plan including QA/QC procedures in the PDD and hence CL 7 was closed.
CL 8	Justification of Acceptance
Mode of data archiving was not clear from section B.7 of the PDD. Data Uncertainty and emergency preparedness were not clearly stated in section B.7.2 of the PDD and hence CL 8 was raised.	In response, the PP stated the mode of archiving as electronic. Data uncertainty and emergency preparedness was clearly stated in section B.7.2 of the PDD and hence CL 8 was closed.



Hence, the validation team was able to conclude that the monitoring plan is feasible with the project design and the means of implementation of the monitoring plan, including the data management and quality assurance and quality control procedures, are sufficient to ensure that the emission reductions resulting from the proposed CDM project activity can be reported ex-post and verified.

From the above mentioned information the validation team is of the opinion that the project participant is capable of implementing the monitoring plan.

3.9 Sustainable development (127)

The project participant has described the contribution of the project activity to sustainable development on the basis of the four indicators of sustainable development stipulated by DNA of India viz. Ministry of Environment & Forests. The validation team is of the opinion that the description provided is adequate. The project provides employment to local people and the same was confirmed by meeting local villagers during the on-site visit. The project supplies electricity to the state grid. The host Party's DNA confirmed the contribution of the project to the sustainable development of the host Party. The same is described in greater detail in section 3.1 of this report.

3.10 Local stakeholder consultation (130)

The steps taken to assess the adequacy of the local stakeholder consultation are described below:

The local stakeholder's consultation meeting was conducted by Project Participant to receive the comments/suggestions of local stakeholder's on the project activity. Stakeholders' consultation meeting was held on 24th November, 2011 (Ref P/11/). The stakeholders were invited to attend the meeting through personal invitations sent on 7th November, 2011 thus giving sufficient notice to the stakeholders to attend.

Acknowledged copies of invitation letters were provided to the validation team (Ref P/12/). Also, during the site visit by the validation team to the solar power generation site, interview was conducted with local stakeholders. The local villagers appreciated the project activity. The project has given employment to local residents and the local villagers viewed the project as contributing to local environmental benefits and social-economy. There were no negative comments from the stakeholders regarding the project activity.

The DOE hereby confirms that the process of local stakeholder consultation is observed to be adequate.



3.11 Environmental impacts (133)

As per the Schedule of the EIA notification dated 14th September 2006 (Ref P/13/), given by the Ministry of Environment and Forests (Government of India) under the Environment (Protection) Act 1986, EIA is not a regulatory requirement in India for solar PV projects. Thus the project activity doesn't require EIA. The project activity does not involve any negative environmental impacts, as the solar modules are installed for generation of power using solar energy which is a clean source of energy.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

The PDD using methodology AMS-I.D, version 17 was webhosted on the UNFCCC for global stakeholder's comments as per CDM requirements. The project was Web hosted from 10th February, 2012 to 10th March, 2012. Comments were received from one person. The project participant provided responses to these comments. Validation team took due account of these comments and the respective responses while making the validation opinion. The details of the comments received, responses by the project participant/s and the explanation of how due account of these comments is taken by the validation team are attached as Appendix B with this validation report.

5 VALIDATION OPINION

Bureau Veritas Certification has performed a validation of the "Grid connected solar PV power plant in Jodhpur, Rajasthan" in India. The validation was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

The validation consisted of the following three phases: i) a desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) the resolution of outstanding issues and the issuance of the final validation report and opinion.

Project participant used Attachment A to Appendix B of Simplified modalities and procedures for small scale CDM project activities for demonstration of additionality. The same guideline exempts the project activity from demonstration of additionality and defines the project activity as automatic additional.

By synthetic description of the project, the project is likely to result in reductions of GHG emissions partially. An analysis of the project description demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project



activity. Given that the project is implemented and maintained as designed, the project is likely to achieve the estimated amount of 8,542 tCO₂e emission reductions.

The review of the project design documentation (version 02) and the subsequent follow-up interviews have provided Bureau Veritas Certification with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the project correctly applies and meets the relevant UNFCCC requirements for the CDM and the relevant host country criteria. Bureau Veritas Certification thus requests registration of “Grid connected solar PV power plant in Jodhpur, Rajasthan” as CDM project activity.

6 REFERENCES

Category 1 Documents:

Documents provided by Northwest Energy Private Limited that relate directly to the GHG components of the project.

/P1/	Host Country Approval No. 4/6/2012-CCC dated 19/04/2012
/P2/	Web-hosted PDD, version 1, dated 22/12/2011
/P3/	Project Design Document (PDD) version 02, dated 24/07/2012
/P4/	Commissioning certificate from EPC Contractor(Sterling and Wilson Limited) dated 24/05/2012
/P5/	Purchase Order placed to Solar Frontier K.K dated 12/10/2011
/P6/	Power Purchase Agreement signed with NTPC Vidyut Vyapar Nigam Limited dated 10/01/2011
/P7/	CEA database version 07(Jan 2012)
/P8/	ER calculation sheet
/P9/	PLF Assessment Report prepared by Suncraft Energy Private Limited
/P10/	RERC tariff Order dated 25/05/2010
/P11/	Minutes of meeting and attendance sheet for local stakeholder's consultation conducted on 24/11/2011
/P12/	Acknowledgement copies of invitation letters sent to local stakeholder's dated 07/11/2011
/P13/	EIA Notification dated 14/09/2006

Category 2 Documents:

Background documents related to the design and/or methodologies employed in the design or other reference documents.

B/1/	Validation and Verification Manual Version 1.2
B/2/	AMS-I.D.– Grid connected renewable electricity generation(version 17)
B/3/	General Guidelines to SSC CDM methodologies(version 18)
B/4/	Tool to calculate the emission factor for an electricity system(version 02.2.1)
B/5/	Guidelines for the reporting and validation of Plant load factors(version 01)
B/6/	Guidelines on the demonstration and assessment of prior consideration of the CDM (version 04)
B/7/	Attachment A of Appendix B of the Simplified Modalities and Procedures for Small Scale project activities (Version 06)

**Persons interviewed:**

List persons interviewed during the validation or persons that contributed with other information that are not included in the documents listed above.

/1/	Manoj Kumar, Northwest Energy Private Limited
/2/	Manish Kumar, Northwest Energy Private Limited
/3/	Subash Chandra Pandey, Northwest Energy Private Limited
/4/	Pankaj Sharma, KPMG
/5/	Rajeshwar Singh, Northwest Energy Private Limited
/6/	Bhagwana Ram, Village Rawra
/7/	Pokhar Ram, Village Rawra
/8/	Narayan Ram, Village Rawra

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7 CURRICULA VITAE OF THE DOE'S VALIDATION TEAM MEMBERS

Anurag Juyal – Team Leader, Lead Verifier - Climate change

Mr. Anurag Juyal is a Post-graduate in Energy Systems with around 4 years of experience in the field of climate change services. He is working in Bureau Veritas Certification (India) Pvt. Ltd. as Verifier-Climate Change. Prior to joining Bureau Veritas, he worked on GS/CDM/VCS projects as a consultant. He has received extensive training in CDM validation and verification processes and participated in assessment of CDM projects.

Rakesh Tripathi– Team Member, Verifier - Climate change

Mr. Rakesh Tripathi is graduate (B. Tech) in Electronics and communication and Post-graduate (MBA) in Power management with around 2.5 years of experience in the field of climate change services. He is working with Bureau Veritas Certification (India) Pvt. Ltd. as Verifier-Climate Change. Prior to joining Bureau Veritas, he worked on CDM/VCS projects as a consultant. He has received extensive training in CDM validation and verification processes and participated in assessment of CDM projects.

Nazia Naqvi– Observer, Verifier - Climate change

Ms. Nazia Naqvi is a Post-graduate in M.Sc Energy Systems with over 3 years of experience in the field of clean development mechanism. She is working in Bureau Veritas Certification (India) Pvt. Ltd. as Verifier-Climate Change. She has received extensive training in CDM validation and verification processes and participated in assessment of CDM/VCS projects.

H.B Muralidhar, Bureau Veritas Certification, Internal Technical Reviewer

Lead auditor in Bureau Veritas Certification for Environment Management System, Quality Management System and Occupational Health and Safety Management System. Graduate in Electrical Engineering with 25 years of experience power generation and distribution related fields as well as in management system auditing. He is the Lead auditor for Environmental Management System, Quality Management system and Occupational Health and Safety Management System. He has undergone intensive training on Clean Development Mechanism. He is the technical expert & conducted Validation / Verification for more than 50 CDM Projects.

APPENDIX A: COMPANY CDM PROJECT VALIDATION PROTOCOL

Table 1 Validation requirements based on the Clean Development Mechanism Validation and Verification Manual (Version 01.2) and methodology AMS I.D (version 17) - "Grid connected renewable electricity generation"

CHECKLIST QUESTION	Ref.	§	COMMENTS		Draft Concl	Final Concl
1. Approval			<i>COUNTRY A (India)</i>	<i>COUN TRY B (Not applic able)</i>		
a. Have all Parties involved approved the project activity?	VVM	44	The project participant has not submitted the Host Country Approval of the party involved in the project activity.	N/A	CL-1	
b. Has the DNA of each Party indicated as being involved in the proposed CDM project activity in section A.3 of the PDD provided a written letter of approval? (If yes, provide the reference of the letter of approval, any supporting documentation, and specify if the letter was received from the project participatn or directly from the DNA)	VVM	45	The project participant has not submitted the Host Country Approval of the party involved in the project activity.	N/A	(CL-1)	
c. Does the letter of approval from DNA of each Party involved:	VVM	45		N/A	-	-
i. confirm that the Party is a Party of the Kyoto Protocol?	VVM	45.a	The project participant has not submitted the Host Country Approval	N/A	(CL-1)	



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS		Draft Concl	Final Concl
			of the party involved in the project activity.			
ii. confirm that participation is voluntary?	VVM	45.b	The project participant has not submitted the Host Country Approval of the party involved in the project activity.	N/A	(CL-1)	
iii. confirm that, in the case of the host Party, the proposed CDM project activity contributes to the sustainable development of the country?	VVM	45.c	The project participant has not submitted the Host Country Approval of the party involved in the project activity.	N/A	(CL-1)	
iv. Refers to the precise proposed CDM project activity title in the PDD being submitted for registration?	VVM	45.d	The project participant has not submitted the Host Country Approval of the party involved in the project activity.	N/A	(CL-1)	
d. Is(are) the letter(s) of approval unconditional with respect to (i) to (iv) above?	VVM	46	The project participant has not submitted the Host Country Approval of the party involved in the project activity.	N/A	(CL-1)	
e. Has(ve) the letter(s) of approval been issued by the respective Party's designated national authority (DNA) and is valid for the CDM project activity under validation?	VVM	47	The project participant has not submitted the Host Country Approval of the party involved in the project activity.	N/A	(CL-1)	
f. Is there doubt with respect to the authenticity of the letter of approval?	VVM	48	The project participant has not submitted the Host Country Approval of the party involved in the project activity.	N/A	(CL-1)	
g. If yes, was verified with the DNA that the	VVM	48	The project participant has not	N/A	(CL-1)	



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS		Draft Concl	Final Concl
letter of approval is authentic?			submitted the Host Country Approval of the party involved in the project activity.			
2. Participation			<i>PP1 (Northwest Energy Private Limited)</i>	<i>PP2 (Not Applicable)</i>		
a. Have all project participants been listed in a consistent manner in the project documentation?	VVM	51	There is only one entity involved in the project and the same has been listed consistently as "Northwest Energy Private Limited" in the web hosted PDD.	N/A	OK	OK
b. Has the participation of the project participants in the project activity been approved by a Party to the Kyoto Protocol?	VVM	51	The project participant has not submitted the Host Country Approval of the party involved in the project activity.	N/A	(CL-1)	
c. Are the project participants listed in tabular form in section A.3 of the PDD?	VVM	52	The project participant is "Northwest Energy Private Limited" which is listed in tabular form in section A.3 of the web hosted PDD.	N/A	OK	OK
d. Is the information in section A.3 consistent with the contact details provided in annex 1 of the PDD?	VVM	52	The project participant is "Northwest Energy Private Limited" which is listed in tabular form in section A.3 of the PDD and consistent with contact details provided in annex 1 of the PDD.	N/A	OK	OK
e. Has the participation of each of the project	VVM	52	The only party involved in the	N/A	(CL-1)	



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
participants been approved by at least one Party involved, either in a letter of approval or in a separate letter specifically to approve participation? (Provide reference of the approval document for each of the project participants)			proposed CDM project activity is India. The project participant has not submitted the Host Country Approval of the party involved (India) in the project activity.		
f. Are any entities other than those approved as project participants included in these sections of the PDD?	VVM	52	The project participant has not submitted the Host Country Approval of the party involved in the project activity.	(CL-1)	
g. Has the approval of participation issued from the relevant DNA?	VVM	53	The project participant has not submitted the Host Country Approval of the party involved in the project activity.	(CL-1)	
h. Is there doubt with respect to (g) above?	VVM	53	The project participant has not submitted the Host Country Approval of the party involved in the project activity.	(CL-1)	
i. If yes, was verified with the DNA that the approval of participation is valid for the proposed project participant?	VVM	53	The project participant has not submitted the Host Country Approval of the party involved in the project activity.	(CL-1)	
3. Project desing document					
a. Is the PDD used as a basis for validation prepared in accordance with the latest template and guidance from the CDM Executive Board available on the UNFCCC	VVM	55	The DOE has used the web hosted PDD as a basis of for the validation. The web hosted PDD prepared is in accordance with the applicable template and guidance i.e. CLEAN	OK	OK



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
CDM website?			DEVELOPMENT MECHANISM PROJECT DESIGN DOCUMENT FORM (CDM-SSC-PDD) Version 03 - in effect as of : 22 December 2006) and applicable until 30 th April 2012 for web-hosting of the PDDs.		
b. Is the PDD in accordance with the applicable CDM requirements for completing the PDD?	VVM	56	The web hosted PDD is prepared as per the applicable CDM requirements for completing the PDD i.e. GUIDELINES FOR COMPLETING THE SIMPLIFIED PROJECT DESIGN DOCUMENT (CDM-SSC-PDD) AND THE FORM FOR PROPOSED NEW SMALL SCALE METHODOLOGIES (CDM-SSC-NM), version 5.	OK	OK
c. In CDM-SSC-PDD section A.1 are following provided?	EB 34	Ann 09			
i. Title of project	EB 34	Ann 09	The title of the project activity is provided as "Grid connected solar PV power plant in Jodhpur, Rajasthan" in section A.1 of the PDD.	OK	OK
ii. Current version number and date of document	EB 34	Ann 09	Current version of the web hosted PDD is mentioned as "1" and date of the PDD as "22/12/2011".	OK	OK
d. In CDM-SSC-PDD section A.2 are following provided (max. one page)?	EB 34	Ann 09			
i. A brief description of the project activity covering purpose which includes the scenario existing prior to the start of project, present scenario and baseline.	EB 34	Ann 09	A brief description of the project activity including purpose along with scenario existing prior to the start of the project activity, baseline scenario and present scenario has been	OK	OK



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			provided in section A.2 of the web hosted PDD.		
ii. Explanation how the GHG emission reductions are effected.	EB 34	Ann 09	Yes, the project participant has provided a description on the same under section A.2 of the web-hosted PDD.	OK	OK
iii. The PP's view on the contribution of project activity to sustainable development.	EB 34	Ann 09	The project participant has provided its views on the contribution of the project activity to sustainable development of the host country in accordance with the host country's NCDMA criteria.	OK	OK
iv. Are there any changes/modifications compared to the webhosted PDD?	EB 34	Ann 09	There are no changes/modifications compared to the webhosted PDD	OK	OK
e. In CDM-SSC-PDD section A.3 are following provided in the tabular format?	EB 34	Ann 09		-	-
i. List of project participants and Party(ies)	EB 34	Ann 09	PDD indicates the name of "Northwest Energy Private Limited (Private entity)" as project participant and "India" as (host) party in section A.3 of the PDD.	OK	OK
ii. Identification of host party	EB 34	Ann 09	India has been identified as host party in section A.3 of the PDD.	OK	OK
iii. Indication whether the Party wishes to be considered as project participant	EB 34	Ann 09	It has been indicated that the party does not wish to be considered as project participant.	OK	OK
f. In CDM-SSC-PDD section A.4.1 are following provided?	EB 34	Ann 09			
i. Technical description, location, host party(ies) and address as required?	EB 34	Ann 09	The following details have been provided in section A.4.1 of the PDD related to Location of the project activity	OK	OK



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			Village:- Rawra, Taluka:- Phalodi and District:- Jodhpur Latitude:- 27° 24' 42.447" N and Longitude:- 72° 12' 44.753" E		
ii. Detailed physical location with unique identification of the project activity (eg. Longitude/latitude) – not to exceed one page	EB 34	Ann 09	Please refer 3.f.i (above)		
g. In CDM-SSC-PDD section A.4.2 are following provided	EB 34	Ann 09			
i. the list of categories of project activities as per the latest categorization of Appendix B to the simplified modalities and procedures for small-scale CDM project activities, hereafter referred to as Appendix B. (refer http://cdm.unfccc.int/methodologies/SSCMethologies)	EB 34	Ann 09	The project participant has provided the project category in accordance with the latest list of categories of Appendix B of the simplified modalities and procedures for small-scale CDM project activities.	OK	OK
ii. A description of how environmentally safe and sound technology and know how is being applied by the project activity interalia technology transfer to the Host Party(ies) for application in the project activity	EB 34	Ann 09	The project participant has provided an explicit description of how environmentally safe and sound technology and knowhow is being applied by the project activity interalia technology transfer to the Host Party(ies) for application in the project activity.	OK	OK
h. In CDM-SSC-PDD section A.4.3 is the	EB	Ann	The estimation of emission reductions	OK	OK



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
estimation of emission reductions provided, as requested, in a tabular format?	34	09	provided in section A.4.3 of the PDD in tabular format		
i. In CDM-SSC-PDD section A.4.4 is information regarding Public funding provided?	EB 34	Ann 09	It has been mentioned in section A.4.4 of the PDD that "there is no public funding is availed for the project activity from the parties included in Annex I".	OK	OK
j. In CDM-SSC-PDD section A.4.5 are following provided?	EB 34	Ann 09			
i. Confirmation that the small-scale project activity is not a debundled component of a large scale project activity.	EB 34	Ann 09	The project participant has mentioned that there is neither a registered small-scale CDM project nor a request for registration of a small-scale CDM project is made by the project participant. Having reviewed the UNFCCC web site the validation team also confirms that the proposed CDM project activity is not a de-bundled component of a large project activity.	OK	OK
ii. Indication if there is a registered small-scale project activity under the CDM or an application to register another small-scale project activity under the CDM	EB 34	Ann 09	This is a first CDM project activity of the project participant and there is neither a registered project nor an application to register a small-scale project is made by the project participant Hence, this is not required.	OK	OK
a. With the same project participants	EB 34	Ann 09	There is no registered small-scale project activity under the CDM or an application to register another small-scale project activity under the CDM by the same project participant.	OK	OK
b. Registered within the period of 2	EB	Ann	There is no registered small-scale project	OK	OK



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
years	34	09	activity under the CDM or an application to register another small-scale project activity under the CDM within the period of two years.		
c. Whose project boundary is within 1 km of the project boundary of the proposed small-scale activity under the CDM at the closest point.	EB 34	Ann 09	There is no registered small-scale project activity under the CDM or an application to register another small-scale project activity under the CDM by whose project boundary is within 1 km of the project boundary of proposed CDM project activity.	OK	OK
iii. Are there any changes/modifications compared to the webhosted PDD?	EB 34	Ann 09	No changes observed compared to the web hosted PDD.	OK	OK
k. In CDM-SSC-PDD section B.1 is the approved baseline and monitoring methodology and version no provided?	EB 34	Ann 09	The project participant has correctly provided the approved baseline and monitoring methodology as AMS I D, version 17 in section B.1 of the PDD.	OK	OK
l. In CDM-SSC-PDD section B.2 are the following provided?	EB 34	Ann 09			
i. Justification of the choice of project activity and category?	EB 34	Ann 09	Justification of the choice of the project activity and its category is provided in section B.2 of the PDD.	OK	OK
ii. Demonstration that the project activity qualifies as a small-scale project activity and that it will remain under the limits of small-scale project activity types during every year of the crediting period as per the following: For Type I : the capacity of the proposed project activity will not	EB 34	Ann 09	It has been demonstrated that the project qualifies as a small-scale project activity and that it will remain under the limits of small-scale project activity type during every year of the crediting period as per the as the project activity is Type I and the capacity of the proposed project activity will not exceed 15	OK	OK



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
exceed 15 MW (or an appropriate equivalent); For Type II: the annual energy savings on account of efficiency improvements will not exceed 60 GWh (or an appropriate equivalent) in any year of the crediting period; For Type III: the estimated emission reductions of the project activity will not exceed 60 ktCO ₂ e in any year of the crediting period.			MW during entire crediting period.		
m. In CDM-SSC-PDD section B.3 is the project boundary of the project activity, based on the guidance of the applicable project category, provided?	EB 34	Ann 09	The project participant has provided the project boundary in accordance with the applied baseline and monitoring methodology and project category.	OK	OK
n. In CDM-SSC-PDD Section B.4 are following provided?	EB 34	Ann 09		-	-
i. The baseline for the proposed project activity with reference to the chosen project category.	EB 34	Ann 09	The baseline for the proposed project activity has been provided in accordance with the chosen project category which is prescribed by the applied methodology AMS-I.D. version 17	OK	OK
ii. Justification of key assumptions and rationales	EB 34	Ann 09	The key assumptions and rationales are justified in section B.4 of the PDD.	OK	OK
iii. Transparent illustration of all data used to determine the baseline emissions (variables, parameters, data sources etc)	EB 34	Ann 09	The data used for the determination of the baseline emissions (variables, parameters, data sources, etc) are provided in a tabular format.	OK	OK
iv. Are there any changes/modifications compared to the webhosted PDD?	EB 34	Ann 09	There are no changes observed in the project boundary as compared to the web hosted	OK	OK


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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			PDD.		
o. In CDM-SSC-PDD section B.5 are following provided?	EB 34	Ann 09		-	-
i. Explanation that the proposed project activity is additional as per options provided under Attachment A to Appendix B of the simplified modalities and procedures for small-scale CDM project activities.	EB 34	Ann 09	The additionality has been provided in accordance with attachment A to appendix B of the simplified modalities and procedures for small-scale CDM project activities.	OK	OK
ii. National policies and circumstances relevant to the baseline of the proposed project activity	EB 34	Ann 09	National policies and circumstances relevant to the baseline of the proposed CDM project activity have been provided in accordance with Annex 3 of EB 22.	OK	OK
iii. Evidence that the incentive from the CDM was seriously considered in the decision to proceed with the project activity, if the starting date of the project activity is before the date of validation. (this is part of the large scale project guidelines. It is better to be retained)	EB 34	Ann 09	In section B.5 of the PDD, PP has mentioned that the F-CDM form dated 06/12/2011 has been sent to UNFCCC and host party DNA within six months from the start date of the project activity i.e. 21/10/2011. The same has been cross checked with the UNFCCC website (http://cdm.unfccc.int/Projects/PriorCDM/notifications/index.html) and e-mail communication with UNFCCC and found that the Intimation has been received by the UNFCCC on 16/12/2011. However, the project participant to provide the acknowledgement of the prior consideration information received by the host country.	CL 2	



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
p. In CDM-SSC-PDD section B.6.1 are following provided?	EB 34	Ann 09		-	-
(i) Explanation on how the procedures, in the approved project category to calculate project emissions, baseline emissions, leakage emissions and emission reductions are applied to the proposed project activity.	EB 34	Ann 09	The section B.6.1 of the PDD explains the procedures as per the approved project category to calculate project emissions, baseline emissions, leakage emissions and emission reductions.	OK	OK
(ii) Clearly stating of which equations will be used in calculating emission reductions.	EB 34	Ann 09	The methodological choice with respect to Para 12 of the applied methodology AMS-I.D. Version 17 is not clear from section B.4 or section B.6.1 of the web-hosted PDD.	CAR 1	
(iii) Explanation and justification of all relevant methodological choices, including: where the category provides different options to choose from; where the category provides for different default values.	EB 34	Ann 09	The explanation and justification of the relevant methodological choices are provided in section B.6.1 of the PDD. However, please refer to 3.p.ii. above.	-	-
q. In CDM-SSC-PDD section B.6.2 are following provided?	EB 34	Ann 09		-	-
i. A compilation of information on the data and parameters that are not monitored but determined upfront so as to be available for validation.	EB 34	Ann 09	The information on the data and parameters that are not monitored but determined upfront and made available at the time of validation has provided in section B.6.2 of the PDD.	OK	OK
ii. The actual value applied.	EB 34	Ann 09	The value applied in section B.6.2 is mentioned.	OK	OK



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
iii. Explanation and justification for the choice of the source of data.	EB 34	Ann 09	The justifications of choice of data are indicated transparently for OM, BM and CM in section B.6.2 of the PDD.	OK	OK
iv. Clear and transparent references or additional documentation in Annex 3.	EB 34	Ann 09	There is no additional information referred in Annex 3 of the PDD. It is stated in Annex 3 that all required information has been provided in section B.6.1 of the PDD.	OK	OK
v. Where values have been measured, a description of the measurement methods and procedures (e.g. which standards have been used), indicated the responsible person/entity having undertaken the measurement, the date of measurement(s) and the measurement results.	EB 34	Ann 09	The project participant has provided the information on operating margin, build margin and combined margin emission factors under section B.6.2 of the web-hosted PDD which is based on the official publication of Central Electricity Utility (a govt, entity).	OK	OK
r. In CDM-SSC-PDD section B.6.3 are following provided?	EB 34	Ann 09		-	-
i. A transparent ex ante calculation of project emissions, baseline emissions (or, where applicable, direct calculation of emission reductions) and leakage emissions expected during the crediting period, applying all relevant equations provided in the approved methodology.	EB 34	Ann 09	The project participant has provided the ex ante calculations of the baseline emissions and emission reduction in section B.6.3 of the PDD, which is in line with applied baseline methodology.	OK	OK
ii. Documentation how each equation is applied, in a manner that enables the reader to reproduce the calculation	EB 34	Ann 09	The application of the equation of baseline emissions and emission reduction has been provided in such a manner that enables the	OK	OK


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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			reader to reproduce the calculation.		
iii. Additional background information and or data in Annex 3, including relevant electronic files (i.e. spreadsheets)	EB 34	Ann 09	There is no further information mentioned in Annex 3 of the PDD as the same is not required.	OK	OK
iv. Emission reduction calculations for each component are provided separately if more than one component activity is applied	EB 34	Ann 09	There is only one component involved in the project activity and the same has been incorporated in calculation of emission reduction.	OK	OK
s. In CDM-SSC-PDD section B.6.4 are the results of the ex ante estimation of emission reductions for all years of the crediting period, in a tabular format, provided?	EB 34	Ann 09	The section B.6.4 of the PDD indicates the ex ante estimation of emission reductions for all years of the first crediting period in a tabular format.	OK	OK
t. In CDM-SSC-PDD section B.7.1 are following provided?	EB 34	Ann 09		-	-
i. Specific information on how the data and parameters that need to be monitored would actually be collected during monitoring for the project activity	EB 34	Ann 09	The information on how the data and parameters, which are required to be monitored, would actually be collected during monitoring of the project activity is provided.	OK	OK
ii. For each below parameter the following information, using the table provided:	EB 34	Ann 09		-	-
a. The source(s) of data that will be actually used for the proposed project activity (e.g. which exact national statistics). Where several sources may be used, explain and justify which data sources should be preferred	EB 34	Ann 09	The project participant has mentioned the source of data used for the monitoring of required parameters.	OK	OK
b. Where data or parameters are	EB	Ann	The measurement and calculation procedures	OK	OK



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supposed to be measured, specify the measurement methods and procedures, including a specification which accepted industry standards or national or international standards will be applied, which measurement equipment is used, how the measurement is undertaken, which calibration procedures are applied, what is the accuracy of the measurement method, who is the responsible person/entity that should undertake the measurements and what is the measurement interval; (i) A description of the QA/QC procedures (if any) that should be applied; (ii) Where relevant: any further comment. Provide any relevant further background documentation in Annex 4.	34	09	are defined and provided in section B.7.1 of the PDD.		
iii. A detailed description of the monitoring plan.	EB 34	Ann 09		-	-
a. The operational and management structure that the project operator will implement in order to monitor emission reductions and any leakage effects generated by the project activity	EB 34	Ann 09	The operational and management structure to monitor the emission reductions has been provided in section B.7.2 of the PDD.	OK	OK



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b. The responsibilities for and institutional arrangements for data collection and archiving	EB 34	Ann 09	The responsibilities for data collection and achieving have been stated in section B.7.2 of the PDD.	OK	OK
c. Does the monitoring plan reflect good monitoring practice appropriate to the type of project activity	EB 34	Ann 09	The monitoring plan is such that it reflects a good monitoring practice. However, refer to the CAR/CL raised in section 7 of this protocol.	OK	OK
d. Relevant further background information in Annex 4	EB 34	Ann 09	There is no information provided in Annex 4 of the PDD. The Annex 4 refers to section B.7 of the PDD only for any information related to the monitoring emission reduction of the proposed CDM project activity. Please refer to section 7 of the protocol for detailed comments on the monitoring plan.	-	-
u. In CDM-SSC-PDD section B.8 are following provided	EB 34	Ann 09		-	-
i. Date of completion of the application of the methodology to the project activity study in DD/MM/YYYY.	EB 34	Ann 09	The date of the application of the baseline and monitoring methodology has been provided in DD/MM/YYYY as 01/12/2011.	OK	OK
ii. Contact information of the person(s)/entity(ies) responsible for the application of the baseline and monitoring methodology to the project activity	EB 34	Ann 09	The contact information of the person/entity responsible for the application of the baseline and monitoring methodology has been provided in Annex 1, which is referred in Section B.8 of the PDD.	OK	OK
iii. Indicated if the person/entity is also a project participant listed in Annex 1	EB 34	Ann 09	It has been indicated in the PDD that the person/entity responsible for application of baseline and monitoring methodology is also a project participant and the contact information	OK	OK



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			is provided in Annex 1 of the PDD.		
v. In CDM-SSC-PDD section C.1.1 are following provided?	EB 34	Ann 09		-	-
i. The starting date of a CDM project activity is the earliest of the date(s) on which the implementation or construction or real action of a project activity begins/has begun (EB33, Para 76/CDM Glossary of terms/EB41, Para 67)	EB 34	Ann 09	The starting date of the proposed CDM project activity is provided as the date of release of Purchase Order for solar PV modules. This is as per the Glossary of terms (EB 41). However, start date mentioned in section C.1.1 of the webhosted PDD is not consistent with the date of first purchase order issued to Solar Frontier K.K.	CAR 2	
ii. A description of how this start date has been determined, and a description of the evidence available to support this start date	EB 34	Ann 09	The description on how the start date of the project activity has been determined is provided and an evidence i.e. copy of the purchase order has been made available to the validation team. The contract is reviewed and confirmed that the start date considered is in accordance with the CDM glossary of terms.	OK	OK
iii. If this starting date is earlier than the date of publication of the CDM-SSC-PDD for global stakeholder consultation by a DOE, does Section B.5 above contain a description of how the benefits of the CDM were seriously considered prior to the starting date?	EB 34	Ann 09	The starting date of the project activity is earlier than the date of publication of the PDD for global stakeholders' consultation and the prior consideration of CDM has been explained and demonstrated in the section B.5 of the PDD.	OK	OK
w. In CDM-SSC-PDD section C.1.2 is the	EB	Ann	The expected lifetime of the project activity has	OK	OK


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expected operational lifetime of the project activity in years and months provided?	34	09	been provided as 25 years and 0 months in section C.1.2 of the PDD. The same has been cross checked with the tariff order dated 9/11/2010 issued by Central Electricity Regulatory Commission (CERC).		
x. In CDM-SSC-PDD section C.2 is it stated whether the project activity will use a renewable or a fixed crediting period and completed C.2.1 or C.2.2 accordingly?	EB 34	Ann 09	It has been stated in section C.2 of the PDD that the project activity will use the renewable crediting period.	OK	OK
y. In CDM-SSC-PDD section C.2.1 is it indicated that each crediting period shall be at most 7 years and may be renewed at most two times, provided that, for each renewal, a designated operational entity determines and informs the Executive Board that the original project baseline is still valid or has been updated taking account of new data where applicable?	EB 34	Ann 09	The maximum length of first crediting period and its renewal frequency is not clear from the section C.2.1 of the web hosted PDD.	CAR 3	
z. In CDM-SSC-PDD section C.2.1.1 are the dates in the following format: (DD/MM/YYYY) provided?	EB 34	Ann 09	The starting date of the first crediting period of the project activity has been specified in the web-hosted PDD as 01/04/2012 which is not in accordance with the provisions of the CDM Modalities and Procedures.	CAR 4	
aa. In CDM-SSC-PDD section C.2.1.2 is the length of the first crediting period in years and months?	EB 34	Ann 09	The length of the first crediting period is mentioned as 7 years and 0 month.	OK	OK
bb. In CDM-SSC-PDD section C.2.2 is it	EB	Ann	Not applicable as the project activity uses	OK	OK


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indicated fixed crediting period at most ten (10) years	34	09	renewable crediting period.		
cc. In CDM-SSC-PDD section C.2.2.1 are the dates in the format (DD/MM/YYYY) provided?	EB 34	Ann 09	Not applicable as the project activity uses renewable crediting period.	OK	OK
dd. In CDM-SSC-PDD section C.2.2.2 is the length of the crediting period in years and months provided?	EB 34	Ann 09	Not applicable as the project activity uses renewable crediting period.	OK	OK
ee. In CDM-SSC-PDD section D.1 is the documentation on the analysis of the environmental impacts, if required by Host Party, provided?	EB 34	Ann 09	It is explained in the section D.1 of the PDD that the proposed CDM project activity does not require Environment Impact Assessment as per the notification of the Ministry of Environment and Forests (MoEF), Government of India vide notification no. S.O. 1533 (E) dated September 14, 2006.	OK	OK
ff. In CDM-SSC-PDD section E.1 are following provided?	EB 34	Ann 09		-	-
i. The process by which comments by local stakeholders have been invited and compiled. An invitation for comments by local stakeholders shall be made in an open and transparent manner, in a way that facilitates comments to be received from local stakeholders and allows for a reasonable time for comments to be submitted	EB 34	Ann 09	In Section E.1, PP has mentioned that the local stakeholders were invited through personal invitation sent on 07/11/2011. However the proceedings of the local stakeholder consultation meeting is not clear from section E.1 of the web-hosted PDD.	CAR 5	
ii. The project activity is described in a	EB	Ann	Refer to 3.ff.i. above.		



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manner, which allows the local stakeholders to understand the project activity, taking into account confidentiality provisions of the CDM modalities and procedures.	34	09			
iii. The local stakeholder process has been completed before submitting the proposed project activity to the DOE for validation	EB 34	Ann 09	The local stakeholder process has been completed on 24/11/2011, which is prior to the submission of the PDD to DOE for validation.	OK	OK
gg. In CDM-SSC-PDD section E.2 are following provided?	EB 34	Ann 09		-	-
i. Local stakeholders that have made comments identified.	EB 34	Ann 09	Stakeholders were identified with the details/names of the local stakeholders, who made comments during consultation meeting.	OK	OK
ii. A summary of these comments	EB 34	Ann 09	The summary of the comments are provided in section E.2 of the PDD.	OK	OK
hh. In CDM-SSC-PDD section E.3 is and explanation of how due account have been taken of comments received from local stakeholders provided?	EB 34	Ann 09	It has been stated that the local stakeholders appreciated the environment friendly initiative.	OK	OK
ii. In CDM-SSC-PDD Annex 1 are following provided?	EB 34	Ann 09		-	-
i. Contact information of project participants	EB 34	Ann 09	The contact information of the project participant has been provided in Annex 1 of the PDD.	OK	OK
ii. For each organisation listed in section A.3 the following mandatory fields: Organization, Name of contact person,	EB 34	Ann 09	All the mandatory fields are provided in Annex 1 of the PDD.	OK	OK


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Street, City, Postfix/ZIP, Country, Telephone and Fax or e-mail					
jj. In CDM-SSC-PDD Annex 2 is information from Parties included in Annex I on sources of public funding for the project activity which shall provide an affirmation that such funding does not result in a diversion of official development assistance and is separate from and is not counted towards the financial obligations of those Parties provided?	EB 34	Ann 09	It has been stated in Annex 2 that there is no public funding involved in the proposed CDM project activity.	OK	OK
kk. In CDM-SSC-PDD Annex 3 is the background information used in the application of the baseline methodology provided?	EB 34	Ann 09	There isn't any additional information provided in Annex 3 of the PDD with respect to the identification of the baseline in line with applied baseline and monitoring methodology.	OK	OK
ll. In CDM-SSC-PDD Annex 4 is the background information used in the application of the monitoring methodology provided?	EB 34	Ann 09	The Annex 4 refers to the section B.7 of the PDD and there is no additional information in Annex 4.	OK	OK
4. Project description					
a. Does the PDD contain a clear description of the project activity that provides the reader with a clear understanding of the precise nature of the project activity and the technical aspects of its implementation?	VVM	58	The description provided in section A.4.2 of the PDD indicates that the project activity involves solar panels of nominal power of 145Wp. However, it has been observed from the purchase order submitted by the project participant (dated 12/10/2011) refers to two	CL 3	


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			types of the solar PV modules (155 Wp and 145 Wp) under the scope of supply. The details provided in the purchase order do not match with the information provided under section A.4.2 of the web-hosted PDD. Please clarify. In addition, the number of the PV modules being commissioned under each nominal power class is not clear from section A.3 of the web-hosted PDD.		
b. Is the description of the proposed CDM project activity as contained in the PDD:	VVM	59		-	-
i. sufficiently covering all relevant elements?	VVM	59	The PDD covers the relevant elements of the proposed CDM project activity. However, refer to 4.a. above.		
ii. accurate?	VVM	59	Please refer to 4.a. above.	OK	OK
iii. providing the reader with a clear understanding of the nature of the proposed CDM project activity?	VVM	59	The description provided in section A.4.2 of the PDD indicates that the project activity involves solar panels of nominal power of 145Wp. However, it has been observed from the purchase order submitted by the project participant (dated 12/10/2011) refers to two types of the solar PV modules (155 Wp and 145 Wp) under the scope of supply. The details provided in the purchase order do not match with the information provided under	(CL 3)	



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			section A.4.2 of the web-hosted PDD. Please clarify. In addition, the number of the PV modules being commissioned under each nominal power class is not clear from section A.3 of the web-hosted PDD.		
iv. Are there any changes/modifications compared to the webhosted PDD?	VVM	59	Please refer to 4.a. above.	OK	OK
c. Is the proposed CDM project activity in existing facilities or or utilizing existing equipments?	VVM	60	The project activity is a Greenfield project and does not utilise any existing facility or equipment.	OK	OK
d. Is the CDM project activity one of the following types:	VVM	60		-	-
i. Large scale?	VVM	60	The project activity is not a large scale project.	OK	OK
ii. Non-bundled small scale projects with emission reductions exceeding 15,000 tonnes per year?	VVM	60	The proposed CDM project activity is a non-bundled small scale CDM project with emission reduction not exceeding 15000 tonnes per year.	OK	OK
iii. Bundled small scale projects, each with emission reductions not exceeding 15,000 tonnes?	VVM	60	The project activity is not a bundled CDM project with emission reductions not exceeding 15,000 tonnes.	OK	OK
e. If yes to (c) and (d) above, was a physical site inspection conducted to confirm that the description in the PDD reflects the proposed CDM project activity, unless other means are specified in the methodology?	VVM	60	This is not applicable, However, in order to cross-check the project information contained in the web-hosted PDD, a two member validation team has conducted the physical site inspection of the project.	OK	OK


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f. If yes to (d.iii) above, was the number of physical site visits based on sampling?	VVM	60	Please refer to 4.e. above.	-	-
g. If yes is the sampling size appropriately justified through statistical analysis?	VVM	60	The project activity is located at the single site. Sampling is not applicable.	OK	OK
h. For other individual proposed small scale CDM project activities with emission reductions not exceeding 15,000 tonnes per year, was a physical site inspection conducted?	VVM	61	The project activity is an individual proposed small scale CDM project with emission reductions not exceeding 15000 tonnes per year. A two member validation team of BVC conducted a physical site inspection on 12/06/2012.	OK	OK
i. For all other proposed CDM project activities not referred to in paragraphs 59 – 61, was a physical site inspection conducted?	VVM	62	As mentioned above, the validation team conducted a physical site inspection on 12/06/2012.	OK	OK
j. If no, was it appropriately justified?	VVM	62	Please refer to 4.h. above.	OK	OK
k. Does the proposed CDM project activity involve the alteration of an existing installation or process?	VVM	63	The proposed CDM project activity is a Greenfield project with purchase of new equipments and does not involve any alteration of an existing installation or process. However, please refer to 4.a. above.	-	-
l. If yes, does the project description clearly state the differences resulting from the project activity compared to the pre-project situation?	VVM	63	The project activity is a Greenfield grid connected solar PV project. There was not power generation facility at the site prior to the implementation of the project activity.	OK	OK
5. Baseline and monitoring methodology					
a. General requirement					
a. Do the baseline and monitoring	VVM	65	The proposed CDM project activity applies	OK	OK


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methodologies selected by the project participants comply with the methodologies previously approved by the CDM Executive Board?			baseline and monitoring methodology AMS I D, version 17, which is previously approved by CDM Executive Board.		
b. Is the selected methodology applicable to the project activity?	VVM	66	The selected methodology is applicable to the proposed CDM proeject activity.	OK	OK
c. Had the PP correctly applied the selected methodology?	VVM	66	Refer to (5.b) below	-	-
d. Had the selected methodology been correctly applied with respect to project boundary?	VVM	67	Refer to (5.c) below	-	-
e. Had the selected methodology been correctly applied with respect to baseline identification?	VVM	67	Refer to (5.d) below	-	-
f. Had the selected methodology been correctly applied with respect to Algorithms and/or formulae used to determine emission reductions?	VVM	67	Refer to (5.e) below	-	-
g. Had the selected methodology been correctly applied with respect to additionality?	VVM	67	Refer to section (6) below	-	-
Has the general guidance to the small scale CDM methodologies, information on additionality (attachment A to appendix B) been applied correctly?	AMS	I D	The project participant has applied attachment A to appendix B of simplified modalities and procedure for small scale project activities.	OK	OK
h. Had the selected methodology been correctly applied with respect to monitoring	VVM	67	Refer to section (7) below	-	-


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methodology?					
<i>b. Applicability of the selected methodology to the project activity</i>					
a. Is the selected baseline and monitoring methodology, previously approved by the CDM Executive Board, applicable to the project activity including that the used version is valid?	VVM	68	The proposed CDM project activity applied baseline and monitoring methodology AMS I D, version 17, which is previously approved by CDM EB and is applicable to the project activity and valid at the time of validation.	OK	OK
b. Has the DOE applied specific guidance provided by the CDM Executive Board in respect to the applicable approved methodology?	VVM	69	The DOE has applied the general guidance to SSC CDM methodologies provided by CDM EB.	OK	OK
c. Is the methodology correctly quoted?	VVM	70	The methodology has been quoted correctly in the web hosted PDD in section B.1.	OK	OK
d. Are the applicability conditions of the methodology met?	VVM	71			
i. Does the project activity comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass that supply electricity to a national or a regional grid? Note: Project activities that displace electricity from an electricity distribution system that is or would have been supplied by at least one fossil fuel fired	AMS	I D	The proposed CDM project activity comprises of energy (electricity) generation using renewable source of energy i.e. solar energy. The project activity involves installation of solar PV using thin film technology. The proposed CDM project activity is connected to the NEWNE grid of India. Thus, the project activity displaces the electricity from electricity distribution system.	OK	OK


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generating unit shall apply AMS-I.F.					
ii. Has the project participant provided justification in line with the applicability of methodology with respect to Table 2 of approved methodology ?	AMS	I D	The project participant has provided a justification of the applicability of the baseline and monitoring methodology as per Table 2 of the AMS I D, version 17. The option 1 of the table is applicable to the proposed CDM project, which is found to be correct.	OK	OK
iii. Does the project activity a) install a new power plant at 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)	AMS	I D	The proposed CDM project activity includes installation of a new solar PV thin film technology based power plant, where there was no power generation prior to the implementation of the proposed CDM project activity.	OK	OK
iv. For Hydro power plants with reservoirs, does it satisfy at least one of the following conditions (a) the project activity is implemented in an existing reservoir with no change in the volume of reservoir (b) the project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power	AMS	I D	The proposed CDM project activity is solar PV thin film technology for power generation. Hence this is not applicable.	OK	OK


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density of the project activity, is greater than 4 W/m ² (c) the project activity results in new reservoirs and the power density of the power plant is greater than 4 W/m ² .					
v. Is the following guideline followed: (a) If the new unit has both renewable and non-renewable components (eg., a wind/diesel unit), the eligibility limit of 15 MW for a small-scale CDM project activity applies only to the renewable component. (b) If the new unit co-fires fossil fuels, the capacity of the entire unit shall not exceed the limit of 15 MW.	AMS	ID	As explained above, the proposed CDM project activity is a new and Greenfield plant to generate electricity from solar energy. Hence, the proposed CDM project activity does not involve any non-renewable component.	OK	OK
vi. Is the following guideline followed: Combined heat and power (co-generation) systems are not eligible under this category	AMS	ID	The proposed CDM project activity is not a co-generation plant and hence not applicable.	OK	OK
vii. Is the following guideline followed: 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	AMS	ID	As explained above, the proposed CDM project activity is a new and Greenfield plant to generate electricity from solar energy. Hence, the proposed CDM project activity does not involve any addition of renewable energy generating units. Hence, this condition is not relevant and not applicable.	OK	OK



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viii. Is the following guideline followed: 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.	AMS	I D	The proposed CDM project activity does not have any retrofitting. Not applicable.	OK	OK
e. Is the project activity expected to result in emissions other than those allowed by the methodology?	VVM	71	There are no other emissions other than those allowed by the methodology.	OK	OK
f. Is the choice of the methodology justified?	VVM	71	The choice of the methodology has been justified in the section B.2 of the PDD.	OK	OK
g. Have the project participants shown that the project activity meets each of the applicability conditions or the approved methodology?	VVM	71	The project participant has justified the applicability conditions of the methodology in section B.2 of the PDD.	OK	OK
h. Have the project participants shown that the project activity meets each of the applicability conditions of any tool or other methodology component referred to the methodology?	VVM	71	The tool referred by the methodology is "Tool to calculate emission factor of an electricity system", which is applicable in line with applied baseline and monitoring methodology.	OK	OK
i. Is the DOE, based on local and sectoral knowledge, aware that comparable information is available from sources other than that used in the PDD?	VVM	71	The project information presented in the web-hosted PDD has been cross-verified from the purchase orders and the physical site visit on 12/06/2012 conducted by a two member validation team. Thus, the validation team confirms that the project activity meets the applicability conditions of the methodology AMS-I.D. version 17.	OK	OK


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j. If yes, was the PDD cross checked against the other sources to confirm that the project activity meets the applicability conditions of the methodology? (provide the reference to these choices)	VVM	71	The project information presented in the web-hosted PDD has been cross-verified from the purchase orders and the physical site visit on 12/06/2012 conducted by a two member validation team. Thus, the validation team confirms that the project activity meets the applicability conditions of the methodology AMS-I.D. version 17.	OK	OK
k. Can a determination regarding the applicability of the selected methodology to the proposed CDM project activity be made?	VVM	72	The determination regarding the applicability of the selected methodology to the proposed CDM project activity can be made and the validation team confirms that project activity meets the applicability conditions of AMS-I.D version 17.	OK	OK
l. If no, clarification of the methodology was requested, in accordance with the guidance provided by the CDM Executive Board?	VVM	72	Not applicable	OK	OK
m. If answer to (5.b.c) above is "no", revision or deviation from the methodology was requested, in accordance with the guidance provided by the CDM Executive Board?	VVM	73	Not applicable	OK	OK
n. If yes to (5.b.k) and (5.b.l) above, a request for revision was submitted before the CDM Executive Board has approved the proposed deviation or revision?	VVM	74	Not applicable	OK	OK
c. Project boundary					



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a. Does the PDD correctly describe the project boundary, including the physical delineation of the proposed CDM project activity included within the project boundary for the purpose of calculating project and baseline emissions for the proposed CDM project activity?	VVM	78	The project participant has described the project boundary of the proposed CDM project activity in section B.3 of the web hosted PDD. The description of the project boundary is found to be in accordance with the applied baseline and monitoring methodology.	OK	OK
i. Does the physical, geographical site of the renewable generation?	AMS	1 D	The validation team has confirmed that the physical and geographical site of the project activity represents the renewable generation.	OK	OK
b. Is the delineation in the PDD of the project boundary correct and include identification of all locations, processes and equipment including secondary equipment and associated processes such as logistics etc.?	VVM	79	The schematic project boundary diagram provided is not clear with respect to the electricity monitoring locations and evacuation of the electricity to the nearby grid substation as noted by the validation team during site visit on 12/06/2012.	CL 4	
c. Does the delineation in the PDD of the project boundary meet the requirements of the selected baseline?	VVM	79	The delineation of the project boundary in section B.3 of the web hosted PDD meets the requirements of the applied baseline and monitoring methodology.	OK	OK
d. Have changes been made to the project boundary in comparison to the webhosted PDD. If yes please comment on the reason for the changes.	VVM	79	There are no changes observed in the overall project boundary as compared to the web hosted PDD.	OK	OK
e. Have all sources and GHGs required by the methodology been included within the project boundary?	VVM	79	All the sources and GHGs required by the applied baseline and monitoring methodology have been included in the project boundary.	OK	OK



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			The main source of emission in baseline is operation of grid connected thermal power plants and there is no source of GHG emission in the project scenario.		
f. Does the methodology allow project participant to choose whether a source or gas is to be included within the project boundary?	VVM	79	The methodology does not provide such options.	OK	OK
g. If yes, have the project participants justified that choice?	VVM	79	Not applicable	OK	OK
h. If yes, is the justification provided reasonable? (provide reference to the supporting documented evidence provided by the project participants)	VVM	79	Not applicable	OK	OK
d. Baseline identification					
a. Does the PDD identify the baseline for the proposed CDM project activity, defined as the scenario that reasonably represents the anthropogenic emissions by sources of GHGs that would occur in the absence of the proposed CDM project activity?	VVM	81	The web hosted PDD identifies the baseline scenario as the electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid.	OK	OK
b. Has any procedure contained in the methodology to identify the most reasonable baseline scenario, been correctly applied?	VVM	82	The identification of the baseline scenario has been provided in accordance with the applied baseline methodology AMS I D, version 17.	OK	OK
i. Is the following guideline followed: Is the project activity new grid-connected	AMS	I.D	The proposed CDM project activity involves installation of solar (renewable) energy based	OK	OK



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renewable power plant/unit and hence the baseline scenario is the electricity delivered to the grid by the project activity that otherwise would have been generated by the operation of grid-connected power plants and by the addition of new generation sources.			grid connected power plant and hence the baseline scenario is the electricity delivered to the grid by the project activity that otherwise would have been generated by the operation of grid-connected power plants and by the addition of new generation sources.		
ii. Is the baseline emissions calculated as the product of electrical energy baseline EGBL _y expressed in MWh of electricity produced by the renewable generating unit multiplied by the grid emission $BE_y = EGBL_y * EF_{CO2\ grid\ y}$	AMS	I.D	The baseline emissions are calculated as the product of electrical energy baseline expressed in MWh of electricity produced by the renewable generating unit multiplied by the grid emission factor. This has been clearly explained in section B.4 and section B.6.1 of the web hosted PDD.	OK	OK
iii. Is the Emission Factor calculated in a transparent and conservative manner as follows: (a) A combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM) according to the procedures prescribed in the .Tool to calculate the Emission Factor for an electricity system.. OR (b) The weighted average emissions (in t CO ₂ /MWh) of the current generation mix. The data of the year in which project generation occurs must be used.	AMS	I.D	The project participant has used version 6 of CEA database for calculation of emission factor which was not the valid version of CEA database at the time of PDD webhosting. Please clarify.	CL 5	


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Calculations shall be based on data from an official source (where available) and made publicly available.					
iv. Is the following guideline followed: - In the case of landfill gas, waste gas, wastewater treatment and agro-industries projects, recovered methane emissions are eligible under a relevant Type III category. - If the recovered methane is used for electricity generation for supply to a grid then the baseline shall be calculated in accordance with paragraphs below else use other applicable type I methodologies such as AMS-IA or AMS-I.F. - If the recovered methane is used for heat generation or cogeneration it is eligible under category I.C.	AMS	I.D	The proposed CDM project activity is a grid connected solar power plant and hence this is not applicable.	OK	OK
v. Is the following guideline followed for project activities that involve retrofits or replacements of an existing facility for renewable energy generation: - The baseline scenario is the continuing operation of the existing plant. - The methodology uses historical electricity generation data to determine the electricity generation of the existing plant	AMS	I.D	The proposed CDM project activity is a grid connected solar power plant and is a Greenfield project. Hence this is not applicable.	OK	OK


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in the baseline scenario, assuming that the historical situation observed prior to the implementation of the project activity would continue. In the absence of the CDM project activity, the existing facility would continue to provide electricity to the grid BL retrofit y EG, at historical average levels EGhistorical, y until the time at which the electrical generation facility would be likely to be replaced or retrofitted in the absence of the CDM project activity (DATE _{BaselineRetrofit}). From that point of time onwards, the baseline scenario is assumed to correspond to the project activity, and baseline electricity production is assumed to equal the project.s net electricity production and no emission reductions are assumed to occur.					
vi. Is the following guideline followed for Retrofit/capacity addition of hydro, solar, wind, geothermal, wave and tidal plants: - Use of standard deviation for calculating baseline electricity generation. - A minimum of 5 years (60 months) (excluding abnormal years) of historical generation data is required in the case of hydro facilities and for other facilities a	AMS	I.D	The proposed CDM project activity is a grid connected solar power plant and is a greenfield project. Hence this is not applicable.	OK	OK


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minimum of 3 years (36 months) data is required. - In the case that 5 years of historical data are not available - e.g., due to recent retrofits or exceptional circumstances8 - a new methodology or methodology revision shall be proposed. - In the case of wind, solar, wave or tidal power plants, the electricity produced by the added power plant(s) or unit(s) could be directly metered and used to determine EG BL,y. provided that the electricity produced by the added power plant(s) or unit(s) addition is separately metered. - Project activities for capacity addition in hydro or geothermal shall use equation 3 replacing subscript .retrofit. with .capacity addition.					
vii. Is the following guideline followed for Retrofit renewable energy units other than hydro, solar, wind, geothermal, wave and tidal plants: Baseline emissions are calculated as: $BE_{\text{retrofit}, \text{CO}_2, y} = (EG_{\text{PJ}, \text{retrofit}, y} - EG_{\text{BL}, \text{retrofit}, y}) * EF_{\text{CO}_2}$ EG historical - A minimum of 3 years of data is required. In the case that 3 years of	AMS	I.D	The proposed CDM project activity is a grid connected solar power plant and is a greenfield project. Hence this is not applicable.	OK	OK



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historical data are not available 9- e.g., due to recent retrofits or exceptional circumstances - a new methodology or methodology revision shall be proposed					
viii. Is the requirements concerning demonstration of the remaining lifetime of the replaced equipment met as described in the general guidelines to SSC methodologies? Note: If the remaining lifetime of the affected systems increases due to the project activity, the crediting period shall be limited to the estimated remaining lifetime, i.e., the time when the affected systems would have been replaced in the absence of the project activity.	AMS	I.D	The proposed CDM project activity is a grid connected solar power plant and is a greenfield project. Hence there is no requirement of the remaining lifetime of the project activity. However, the operational lifetime of the project activity has been provided as 25 years.	OK	OK
ix. Is the following guideline followed for Capacity addition with renewable energy units other than hydro, solar, wind, geothermal, wave and tidal plants: - The baseline scenario is the existing facility that would continue to supply electricity to the grid at historical levels, until the time at which the generation facility would likely be replaced or retrofitted (DATE _{BaselineRetrofit}). - If the existing units shut down, are	AMS	I.D	The proposed CDM project activity is a grid connected solar power plant and is a greenfield project. There is no capacity addition involved. Hence this is not applicable.	OK	OK


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derated, or otherwise become limited in production, the project activity should not get credit for generating electricity from the same renewable resources that would have otherwise been used by the existing units (or their replacements).					
x. Does project activity involve co-firing ? If yes, the quantities and types of biomass and biomass to fossil fuel ratio to be used during crediting period is explained and documented transparently and presented in PDD ? Are ex ante estimation of these values provided in the PDD ?	AMS	I D	The proposed CDM project activity is a grid connected solar power plant and is a greenfield project. There is no firing/co-firing is required for the operation of the project activity. Hence this is not applicable.	OK	OK
c. Does the selected methodology require use of tools (such as the “Tool for the demonstration and assessment of additionality” and the “Combined tool to identify the baseline scenario and demonstrate additionality”) to establish the baseline scenario?	VVM	81	The proposed project activity is a 5 MW solar power plant using Thin film technology. The project activity qualifies the criteria of small-scale project activity as per the General Guidance to SSC CDM methodologies. Hence, Tool for the demonstration and assessment of additionality” and the “Combined tool to identify the baseline scenario and demonstrate additionality is not applicable. Further, the baseline scenario has been prescribed by the applied baseline and monitoring methodology.	OK	OK
d. If yes, was the methodology consulted on the application of these tools? (In such cases, the guidance in the methodology shall	VVM	82	Not applicable as the proposed CDM project activity is a small-scale project activity.	OK	OK


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supersede the tool.)					
e. Does the methodology require several alternative scenarios to be considered in the identification of the most reasonable baseline scenario?	VVM	83	The applied baseline and monitoring methodology AMSI.D version 17 prescribes the baseline scenario in its paragraph 10 and 11 and hence does not require the several alternative scenario.	OK	OK
f. If yes, are all scenarios that are considered by the project participants and are supplementary to those required by the methodology reasonable in the context of the proposed CDM project activity?	VVM	83	Not applicable as the baseline is prescribed by the applied methodology.	OK	OK
g. Has any reasonable alternative scenario been excluded?	VVM	83	There is no other alternative scenario involves in the determination of the baseline scenario of the proposed CDM project activity.	OK	OK
h. Is the baseline scenario identified reasonably supported by:	VVM	84		-	-
i. Assumptions?	VVM	84	The project participant requested to clarify how PLF considered for the calculation of $EG_{BL,Y}$ in section B.6.3 of the PDD is arrived with reference of source.	CL 6	
ii. Calculations?	VVM	84	The calculations provided in the section B.6.3 of the web hosted PDD are appropriate.	OK	OK
iii. Rationales?	VVM	84	Refer to 5.d.h.i above	-	-
i. Are the documents and sources referred to in the PDD correctly quoted and interpreted?	VVM	84	The documents are quoted correctly as referred in section B.4, Section B.6.1 and section B.6.3 of the web hosted PDD.	OK	OK
j. Was the information provided in the PDD	VVM	84	The information provided in the web hosted	OK	OK



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cross checked with other verifiable and credible sources, such as local expert opinion, if available? (identify the sources)			PDD has been cross-checked with the physical site visit on 12/06/2012 and publicly available information (i.e. Central Electricity Authority, which is the only body under Government of India to produce such information).		
k. Have all applicable CDM requirements been taken into account in the identification of the baseline scenario for the proposed CDM project activity?	VVM	85	All the CDM requirements are taken into consideration in the identification of baselines scenario i.e. the identification of the baseline scenario is in accordance with the applied baseline and monitoring methodology.	OK	OK
l. Have all relevant policies and circumstances been identified and correctly considered in the PDD, in accordance with the guidance by the CDM Executive Board?	VVM	85	National policies and circumstances relevant to the baseline of the proposed CDM project activity is provided in accordance with Annex 3 of EB 22.	OK	OK
m. Does the PDD provide a verifiable 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?	VVM	86	The web hosted PDD provides verifiable description of the identified baseline scenario. The baseline for the grid connected renewable energy projects is prescribed by the methodology itself and the project participant has referred to the same.	OK	OK
e. Algorithms and/or formulae used to determine emission reductions					
a. Do the steps taken and equations applied to calculate project emissions, baseline emissions, leakage and emission reductions comply with the requirements of the selected	VVM	89	The project participant has applied the equations of the baseline emissions and emission reduction calculations correctly in accordance with the applied baseline and	OK	OK



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baseline and monitoring?			monitoring methodology.		
b. Have the equations and parameters in the PDD been correctly applied with respect those in the select approved methodology?	VVM	90	The equations applied are in accordance with paragraph 11 (equation 1) and paragraph 23 (equation 10) of the selected approved baseline and monitoring methodology AMS I D, version 17.	OK	OK
i. Have project emissions considered as described in recent version of ACM0002 followed for: - Emissions related to the operation of geothermal power plants; - Emissions from water reservoirs of hydro power plants.	AMS	I.D	The project emission is considered to be zero in accordance with paragraph 20 of AMS I D, version 17 as the project activity is a grid connected solar power plant.	OK	OK
ii. Is leakage considered, if the energy generating equipment is transfereed from another activity	AMS	I.D	The leakage emission is considered to be zero in accordance with paragraph 22 of AMS I D, version 17 as the project activity is a green field grid connected solar power plant and energy generating equipment is not transferred from another activity.	OK	OK
iii. Is emission reduction calculated as per equation $ER_Y = BE_Y - PE_Y - LE_Y$	AMS	I.D	The emission reductions are calculated as per equation $ER_Y = BE_Y - PE_Y - LE_Y$	OK	OK
c. Does the methodology provide for selection between different options for equations or parameters?	VVM	90	The project activity applies AMS I D, version 17 provides selection of the equation in line with the prescribed baseline scenario, which is correct.	OK	OK
d. If yes, has adequate justification been provided (based on the choice of the	VVM	90	The project activity applies AMS I D, version 17 provides selection of the equation in line	OK	OK



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baseline scenario, context of the proposed CDM project activity and other evidence provided)?			with the prescribed baseline scenario, which is correct.		
e. If yes, have correct equations and parameters been used, in accordance with the methodology selected?	VVM	90	Refer to 5.d.h.i above	-	-
f. Will data and parameters be monitored throughout the crediting period of the proposed CDM project activity?	VVM	91	Some of the data / parameters will not be monitored throughout the crediting period and will be measure ex ante and will be fixed for entire crediting period.	OK	OK
g. If no, and these data and parameters will remain fixed throughout the crediting period, are all data sources and assumptions:	VVM	91	The parameters related to the grid emission factors including OM emission factor, BM emission factor and CM emission factor will be fixed ex ante and throughout the crediting period.	OK	OK
i. Appropriate and correct?	VVM	91	The values provided in section B.6.2 of the web hosted PDD are correct and appropriate to the type of project activity.	OK	OK
ii. Applicable to the proposed CDM project activity?	VVM	91	The parameters combined margin emission factor is applicable to the proposed CDM project activity.	OK	OK
iii. Resulting in a conservative estimate of the emission reductions?	VVM	91	The values are conservative and correct based on the data available publicly, which are produced by CEA, Government of India.	OK	OK
h. Will data and parameters be monitored on implementation and hence become available only after validation of the project activity?	VVM	91	The parameter "Net Electricity Supplied by the project activity i.e. EG _{BL,Y} " is monitored ex post.	OK	OK



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i. If yes, are the estimates provided in the PDD for these data and parameters reasonable?	VVM	91	The estimates of the parameter “Net Electricity Supplied by the project activity i.e. $EG_{BL,Y}$ ” are provided in the section B.6.3 of the web hosted PDD.	-	-
6. Additionality of a project activity					
a. Does the PDD describe how a proposed CDM project activity is additional?	VVM	94	The web hosted PDD describes the additionality of the proposed CDM project activity.	OK	OK
b. Were the following steps of the tool to assess additionality used:	EB 65	Ann 21	The steps required to assess the demonstration of additionality as per the “Tool for the demonstration and assessment of additionality” are not applicable as the proposed CDM project activity is a small-scale CDM project activity. The project participant has referred to the Attachment A to Appendix B (version 8.0). The project activity comes under positive list of technology and automatically qualifies the additionality.	OK	OK
i. Identification of alternatives to the project activity?	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
ii. Investment analysis to determine that the proposed project activity is either: 1) not the most economically or financially attractive, or 2) not economically or financially feasible?	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK



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iii. Barriers analysis?	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
iv. Common practice analysis?	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
c. In step 1 (i) have all the sub-steps as below been followed?	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
(i) Sub-step 1a: Define alternatives to the project activity	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
(ii) Sub-step 1b: Consistency with mandatory laws and regulations	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
d. Have the following alternatives been included while defining alternatives as per sub-step 1a?	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
(a) The proposed project activity undertaken without being registered as a CDM project activity;	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
(b) Other realistic and credible alternative scenario(s) to the proposed CDM project activity scenario that deliver outputs services or services with comparable quality, properties and application areas, taking into account, where relevant, examples of scenarios identified in the underlying methodology;	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
(c) If applicable, continuation of the current situation (no project activity or other alternatives undertaken).	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK


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e. Has the project participant included the technologies or practices that provide outputs or services with comparable quality, properties and application areas as the proposed CDM project activity and that have been implemented previously or are currently being introduced in the relevant country/region?	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
f. Has the outcome of Step 1a: Identified realistic and credible alternative scenario(s) to the project activity done correctly? Please briefly mention the outcome.	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
g. Is the alternative(s) in compliance with all mandatory applicable legal and regulatory requirements, even if these laws and regulations have objectives other than GHG reductions, e.g. to mitigate local air pollution.?	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
h. If an alternative does not comply with all mandatory applicable legislation and regulations, has it been shown that, based on an examination of current practice in the country or region in which the law or regulation applies, those applicable legal or regulatory requirements are systematically not enforced and that noncompliance with those requirements is widespread in the	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK



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country?					
i. Has the outcome of Step 1b: Identified realistic and credible alternative scenario(s) to the project activity that are in compliance with mandatory legislation and regulations taking into account the enforcement in the region or country and EB decisions on national and/or sectoral policies and regulations done correctly? Please state the outcome.	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
j. Has PP selected Step 2 (Investment analysis) or Step 3 (Barrier analysis) or both Steps 2 and 3?	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
k. In step 2, have all the sub-steps as below been followed?	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
(a) Sub-step 2a: Determine appropriate analysis method;	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
(b) Sub-step 2b: Option I. Apply simple cost analysis;	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
(c) Sub-step 2b: Option II. Apply investment comparison analysis;	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
(d) Sub-step 2b: Option III. Apply benchmark analysis;	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
(e) Sub-step 2c: Calculation and comparison of financial indicators (only applicable to Options II and III);	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
(f) Sub-step 2d: Sensitivity analysis (only	EB	Ann	Project comes under positive list of technology	OK	OK


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applicable to Options II and III).	65	21	and hence qualifies the additionality.		
l. In sub-step 2a has the determination of appropriate method of analysis done as per the guidance as below?	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
(a) Simple cost analysis if the CDM project activity and the alternatives identified in Step 1 generate no financial or economic benefits other than CDM related income (Option I).	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
(b) Otherwise, use the investment comparison analysis (Option II) or the benchmark analysis (Option III). Specify option used with justification.	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
m. Has the below guideline followed for sub-step 2b Option I. Apply simple cost analysis? Document the costs associated with the CDM project activity and the alternatives identified in Step1 and demonstrate that there is at least one alternative which is less costly than the project activity.	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
n. Has the below guideline followed for sub-step 2b Option II. Apply investment comparison analysis? Identify the financial indicator, such as IRR, NPV, cost benefit ratio, or unit cost of service most suitable for the project type and decision-making	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK


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context. Please specify					
o. Has the below guideline followed for Sub-step 2b: Option III. Apply benchmark analysis?	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
(a) Identify the financial/economic indicator, such as IRR, most suitable for the project type and decision context.	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
(b) When applying Option II or Option III, the financial/economic analysis shall be based on parameters that are standard in the market, considering the specific characteristics of the project type, but not linked to the subjective profitability expectation or risk profile of a particular project developer. Only in the particular case where the project activity can be implemented by the project participant, the specific financial/economic situation of the company undertaking the project activity can be considered.	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
(c) Discount rates and benchmarks shall be derived from: (a) Government bond rates, increased by a suitable risk premium to reflect private investment and/or the project type, as substantiated by an independent (financial) expert or documented by official publicly available	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK


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financial data; (b) Estimates of the cost of financing and required return on capital (e.g. commercial lending rates and guarantees required for the country and the type of project activity concerned), based on bankers views and private equity investors/funds' required return on comparable projects; (c) A company internal benchmark (weighted average capital cost of the company), only in the particular case referred to above in 2. The project developers shall demonstrate that this benchmark has been consistently used in the past, i.e. that project activities under similar conditions developed by the same company used the same benchmark; (d) Government/official approved benchmark where such benchmarks are used for investment decisions; (e) Any other indicators, if the project participants can demonstrate that the above Options are not applicable and their indicator is appropriately justified. Please specify benchmark and justify.					
p. Has the below guideline followed for Sub-step 2c: Calculation and comparison of financial indicators (only applicable to	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK


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Options II and III)?					
(a) Calculate the suitable financial indicator for the proposed CDM project activity and, in the case of Option II above, for the other alternatives. Include all relevant costs (including, for example, the investment cost, the operations and maintenance costs), and revenues (excluding CER revenues, but possibly including inter alia subsidies/fiscal incentives, ODA, etc, where applicable), and, as appropriate, non-market cost and benefits in the case of public investors if this is standard practice for the selection of public investments in the host country.	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
(b) Present the investment analysis in a transparent manner and provide all the relevant assumptions, preferably in the CDM-PDD, or in separate annexes to the CDM-PDD.	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
(c) Justify and/or cite assumptions.	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
(d) In calculating the financial/economic indicator, the project's risks can be included through the cash flow pattern, subject to project-specific expectations and assumptions.	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK


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(e) Assumptions and input data for the investment analysis shall not differ across the project activity and its alternatives, unless differences can be well substantiated.	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
(f) Present in the CDM-PDD a clear comparison of the financial indicator for the proposed CDM activity. Please specify details for above.	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
q. Has the below guideline followed for Sub-step 2d: Sensitivity analysis (only applicable to Options II and III)? Include a sensitivity analysis that shows whether the conclusion regarding the financial/economic attractiveness is robust to reasonable variations in the critical assumptions.	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
r. Has the outcome of Step 2 clearly mentioned with justification?	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
s. In step 3: Barrier analysis have all the sub-steps as below been followed?	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
Sub-step 3a: Identify barriers that would prevent the implementation of the proposed CDM project activity;	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
Sub-step 3b: Show that the identified barriers would not prevent the implementation of at least one of the alternatives (except the proposed project activity).	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK



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t. Has the below guideline followed for Sub-step 3a: Identify barriers that would prevent the implementation of the proposed CDM project?	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
I. (a) Investment barriers: For alternatives undertaken and operated by private entities: Similar activities have only been implemented with grants or other non-commercial finance terms. No private capital is available from domestic or international capital markets due to real or perceived risks associated with investment in the country where the proposed CDM project activity is to be implemented, as demonstrated by the credit rating of the country or other country investments reports of reputed origin.	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
II. (b) Technological barriers: Skilled and/or properly trained labour to operate and maintain the technology is not available in the relevant country/region, which leads to an unacceptably high risk of equipment disrepair and malfunctioning or other underperformance; Lack of infrastructure for implementation and logistics for maintenance of the technology, Risk of technological failure: the	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK


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process/technology failure risk in the local circumstances is significantly greater than for other technologies that provide services or outputs comparable to those of the proposed CDM project activity, as demonstrated by relevant scientific literature or technology manufacturer information, The particular technology used in the proposed project activity is not available in the relevant region.					
III. (c) Barriers due to prevailing practice: The project activity is the “first of its kind”.	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
IV. (d) Other barriers, preferably specified in the underlying methodology as examples.	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
u. Has the outcome from Step 3a clearly mentioned in PDD?	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
v. Has the below guideline followed for Sub-step 3 b: Show that the identified barriers would not prevent the implementation of at least one of the alternatives (except the proposed project activity)?	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
(a) If the identified barriers also affect other alternatives, explain how they are affected less strongly than they affect the proposed CDM project activity. In other words, demonstrate that the identified barriers do not prevent the	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK


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implementation of at least one of the alternatives. Any alternative that would be prevented by the barriers identified in Sub-step 3a is not a viable alternative, and shall be eliminated from consideration.					
(b) Provide transparent and documented evidence, and offer conservative interpretations of this documented evidence, as to how it demonstrates the existence and significance of the identified barriers and whether alternatives are prevented by these barriers.	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
(c) The type of evidence to be provided should include at least one of the following: (a) Relevant legislation, regulatory information or industry norms; (b) Relevant (sectoral) studies or surveys (e.g. market surveys, technology studies, etc) undertaken by universities, research institutions, industry associations, companies, bilateral/multilateral institutions, etc; (c) Relevant statistical data from national or international statistics; (d) Documentation of relevant market data	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK



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(e.g. market prices, tariffs, rules); (e) Written documentation of independent expert judgments from industry, educational institutions (e.g. universities, technical schools, training centres), industry associations and others. Please specify.					
w. Has the outcome from Step 3 clearly mentioned in PDD?	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
x. In step 4: Common practise analysis have all the sub-steps as below followed?	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
(a) Sub-step 4a: Analyze other activities similar to the proposed project activity;	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
(b) Sub-step 4b: Discuss any similar Options that are occurring.	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
y. Has the below guideline followed for Sub-step 4a: Analyze other activities similar to the proposed project activity? Provide an analysis of any other activities that are operational and that are similar to the proposed project activity. Other CDM project activities are not to be included in this analysis. Provide documented evidence and, where relevant, quantitative information. On the basis of that analysis, describe whether and to which extent similar activities have already diffused in the	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK


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relevant region.					
z. Has the below guideline followed for Sub-step 4b: Discuss any similar Options that are occurring? If similar activities are identified, then it is necessary to demonstrate why the existence of these activities does not contradict the claim that the proposed project activity is financially/economically unattractive or subject to barriers. This can be done by comparing the proposed project activity to the other similar activities, and pointing out and explaining essential distinctions between them that explain why the similar activities enjoyed certain benefits that rendered it financially/economically attractive (e.g., subsidies or other financial flows) and which the proposed project activity cannot use or did not face the barriers to which the proposed project activity is subject. In case similar projects are not accessible, the PDD should include justification about non-accessibility of data/information.	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
aa.Has the outcome from Step 4 clearly mentioned in PDD?	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
bb.Has it been proved that the project is additional?	EB 65	Ann 21	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK



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cc. Has the PP demonstrated additionality by explaining Attachment A to Appendix B including Investment barrier, Technological barrier, Barrier due to prevailing practice or other barriers?	EB 63	Ann 24	The proposed project activity does not demonstrated to be additional using Investment barrier, Technological barrier, Barrier due to prevailing practice or other barriers, as these barriers are not applicable to the solar photovoltaic technology based power generation.	OK	OK
dd. If Investment barrier has been explained, is it demonstraed that financilly more viable alternative to the project activity would have led to higher emissions? Please explain.	EB 63	Ann 24	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
ee. If Technological barrier has been explained, is it demonstraed that a less technologically advanced alternative to the project activity involves lower risks due to the performance uncertainty or low market share of the new technology adopted for the project activity and so would have led to higher emissions? Please explain.	EB 63	Ann 24	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
ff. If prevailing practise barrier has been explained, is it demonstrated that the prevailing practice or existing regulatory or policy requirements would have led to implementation of a technology with higher emissions? Please explain.	EB 63	Ann 24	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
gg. If other barrier has been explained, is it demonstrated that Other barriers such as	EB 63	Ann 24	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK


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institutional barriers or limited information, managerial resources, organizational capacity, or capacity to absorb new technologies would prevent the project activity any way?					
hh. Have the project participants identified the most relevant barrier?	EB 63	Ann 24	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
ii. Does a proposed CDM project activity falls in a positive list of grid-connected 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 including: I. Solar technologies (photovoltaic and solar thermal electricity generation) II. Off-shore wind technologies III. Marine technologies (wave, tidal)	EB 63	Ann 24	The proposed CDM project activity involves installation of grid connected Solar PV technologies based power generation using Thin film technology. As, the project activity falls under the positive list of grid-connected renewable electricity generation technologies that are automatically defined as additional, without further documentation of barriers. Also, the capacity of the proposed CDM project activity is less than 15 MW, which is the threshold limit of small-scale projects.	OK	OK
jj. Have the project participants provided transparent and documented third party evidence such as national/international statistics, national/provincial policy and legislation, studies/surveys by independent agencies etc. to demonstrate the most relevant barrier? Please explain.	EB 63	Ann 24	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
a. Prior consideration of the clean development					



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mechanism					
a. Is the project activity start date prior to the date of publication of the PDD for stakeholder comments?	VVM	98	The project activity start date is 12/10/2011. The PDD was published for the global stakeholders' comments from 10/02/2012 to 10/03/2012. Thus, the start date is before the date of publication.	OK	OK
b. If yes, were the CDM benefits considered necessary in the decision to undertake the project as a proposed CDM project activity?	VVM	98	The CDM benefits were considered necessary in the decision to undertake the proposed CDM project activity.	OK	OK
➤ Is the start date of the project activity, reported in the PDD, in accordance with the "Glossary of CDM terms", which states that "The starting date of a CDM project activity is the earliest date at which either the implementation or construction or real action of a project activity begins"?	VVM	c.	The start date of the project activity is 12/10/2011, which is the date of purchase order to Solar frontier K.K for the project activity. This is in accordance with the "Glossary of CDM terms".	OK	OK
d. Does the project activity require construction, retrofit or other modifications?	VVM	99	The proposed CDM project activity is a Greenfield project and hence does not require construction, retrofit or other modifications.	OK	OK
e. If yes, is it ensured that the date of commissioning cannot be considered as the project activity start date?	VVM	99	Not applicable	OK	OK
f. Is it a new project activity (project activities with starting date on or after 02 August 2008) or an existing project activity (project activities with a start date before 02 August	VVM	100	The start date of the project activity is 12/10/2011, which is after 02 August 2008 and hence, it is a new project activity.	OK	OK


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2008)?					
g. For a new project, for which PDD has not been published for global stakeholder consultation or a new methodology proposed to the Executive Board before the project activity start date, had the PP informed the Host Party DNA and the UNFCCC secretariat in writing of the commencement of the project activity and of their intention to seek CDM status? (Provide reference to such confirmation from Host Party DNA and/or UNFCCC secretariat).	VVM	101	The project activity falls under the new project category as the start date is after 2 nd Aug. 2008. It has been confirmed through UNFCCC website that project participant has informed the UNFCCC secretariat within six months from the start date of the project (date on which the information was received from the PP on 16/12/2011 as verified from the UNFCCC website).	OK	OK
h. For an existing project activity, for which the start date is prior to the date of publication of the PDD for global stakeholder consultation, are the following evidences provided:	VVM	102	Since, the project activity is a new project activity having start date 12/10/2011, which is after 02 August 2008, this is not applicable.	OK	OK
(i) Evidence that must indicate that awareness of the CDM prior to the project activity start date, and that the benefits of the CDM were a decisive factor in the decision to proceed with the project, including, inter alia:	VVM	102	Not applicable	OK	OK
(a) Minutes and/or notes related to the consideration of the decision by the Board of Directors, or equivalent, of the project participant, to undertake the			Not applicable	OK	OK



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project as a proposed CDM project activity?					
(ii) Reliable evidence from project participants that must indicate that continuing and real actions were taken to secure CDM status for the project in parallel with its implementation, including, inter alia:	VVM	102	Not applicable	OK	OK
(iii) contract with consultants for CDM/PDD/methodology services?	VVM	102	Not applicable	OK	OK
(iv) Emission Reduction Purchase Agreements or other documentation related to the sale of the potential CERs (including correspondence with multilateral financial institutions or carbon funds)?	VVM	102	Not applicable	OK	OK
(v) evidence of agreements or negotiations with a DOE for validation services?	VVM	102	Not applicable	OK	OK
(vi) submission of a new methodology to the CDM Executive Board?	VVM	102	Not applicable	OK	OK
(vii) Publication in newspaper?	VVM	102	Not applicable	OK	OK
(viii) interviews with DNA?	VVM	102	Not applicable	OK	OK
(ix) earlier correspondence on the project with the DNA or the UNFCCC secretariat?	VVM	102	The project activity falls under the new project category as the start date is after 2 nd Aug. 2008. It has been confirmed through UNFCCC website that project participant has informed the UNFCCC secretariat within six months	OK	OK



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			from the start date of the project (date on which the information was received from the PP on 16/12/2011 as verified from the UNFCCC website).		
b. Identification of alternatives					
a. Does the approved methodology that is selected by the proposed CDM project activity prescribe the baseline scenario and hence no further analysis is required?	VVM	105	The approved baseline and monitoring methodology applied by the proposed CDM project activity prescribes the baseline scenario in its paragraph 10 and 11. The same has been referred to by the project participant.	OK	OK
b. If no, does the PDD identify credible alternatives to the project activity in order to determine the most realistic baseline scenario?	VVM	105	Alternative scenario analysis not required as the baseline scenario is prescribed by the applied methodology AMS-I.D version 17.	OK	OK
c. Does the list of alternatives given in the PDD ensure that:	VVM	106			
i. the list of alternatives includes as one of the options that the project activity is undertaken without being registered as a proposed CDM project activity?	VVM	106	Not applicable	OK	OK
ii. the list contains all plausible alternatives that the DOE, on the basis of its local and sectoral knowledge, considers to be viable means of supplying the outputs or services that are to be supplied by the proposed	VVM	106	Not applicable	OK	OK



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CDM project activity?					
iii. the alternatives comply with all applicable and enforced legislation?	VVM	106	Not applicable	OK	OK
c. Investment analysis					
a. Has investment analysis been used to demonstrate the additionality of the proposed CDM project activity?	VVM	108	The project participant has referred to the Attachment A to Appendix B (version 8.0) for additionality demonstration. The project activity comes under positive list of technology and automatically qualifies the additionality in accordance with the Attachment A to Appendix B. Hence, investment analysis is not necessary to demonstrate the additionality.	OK	OK
b. If yes, does the PDD provide evidence that the proposed CDM project activity would not be:	VVM	108	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
i. the most economically or financially attractive alternative?	VVM	108	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
ii. economically or financially feasible, without the revenue from the sale of certified emission reductions (CERs)?	VVM	108	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
c. Was this shown by one of the following approaches?	VVM	109	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
i. Demonstrate that the proposed CDM project activity would produce no financial or economic benefits other than CDM-related income. Document	VVM	109	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK



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the costs associated with the proposed CDM project activity and the alternatives identified and demonstrate that there is at least one alternative which is less costly than the proposed CDM project activity.					
ii. The proposed CDM project activity is less economically or financially attractive than at least one other credible and realistic alternative.	VVM	109	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
iii. The financial returns of the proposed CDM project activity would be insufficient to justify the required investment.	VVM	109	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
d. Is the period of assessment limited to the proposed crediting period of the CDM project activity?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
e. Does the project IRR and equity IRR calculations reflect the period of expected operation of the underlying project activity (technical lifetime), or - if a shorter period is chosen - include the fair value of the project activity assets at the end of the assessment period?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
f. Does the IRR calculation include the cost of major maintenance and/or rehabilitation if these are expected to be incurred during the	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK


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period of assessment?					
g. Do the project participants justify the appropriateness of the period of assessment in the context of the underlying project activity, without reference to the proposed CDM crediting period?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
h. Does the cash flow in the final year include a fair value of the project activity assets at the end of the assessment period?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
i. Has the fair value been calculated in accordance with local accounting regulations where available, or international best practice?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
j. Does the fair value calculations include both the book value of the asset and the reasonable expectation of the potential profit or loss on the realization of the assets?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
k. Was depreciation, and other non-cash items related to the project activity, which have been deducted in estimating gross profits on which tax is calculated, added back to net profits for the purpose of calculating the financial indicator (e.g. IRR, NPV)?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
l. Has taxation been included as an expense in the IRR/NPV calculation in cases where the benchmark or other comparator is intended for post-tax comparisons?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK


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m. Are the input values used in all investment analysis valid and applicable at the time of the investment decision taken by the project participant?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
n. Is the timing of the investment decision consistent and appropriate with the input values?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
o. Are all the listed input values been consistently applied in all calculations?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
p. Does the investment analysis reflect the economic decision making context at point of the decision to recommence the project in the case of project activities for which implementation ceases after the commencement and where implementation is recommenced due to consideration of the CDM?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
q. Have project participants supplied the spreadsheet versions of all investment analysis?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
r. Are all formulas used in this analysis readable and all relevant cells be viewable and unprotected?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
s. In cases where the project participant does not wish to make such a spreadsheet available to the public has the PP provided an exact read-only or PDF copy for general	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK



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publication?					
t. In case the PP wishes to black-out certain elements of the publicly available version, is it justifiable?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
u. Was the cost of financing expenditures (i.e. loan repayments and interest) included in the calculation of project IRR?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
v. In the calculation of equity IRR, has only the portion of investment costs which is financed by equity been considered as the net cash outflow?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
w. Has the portion of the investment costs which is financed by debt been considered a cash outflow in the calculation of equity IRR? (this is not allowed)	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
x. Was a pre-tax benchmark be applied?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
y. In cases where a post-tax benchmark is applied, is actual interest payable taken into account in the calculation of income tax?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
z. In such situations, was interest calculated according to the prevailing commercial interest rates in the region, preferably by assessing the cost of other debt recently acquired by the project developer and by applying a debt-equity ratio used by the project developer for investments taken in	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK



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the previous three years?					
aa. In cases where a benchmark approach is used is the applied benchmark appropriate to the type of IRR calculated?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
bb. Has local commercial lending rates or weighted average costs of capital (WACC) selected as appropriate benchmarks for a project IRR?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
cc. Has required/expected returns on equity selected as appropriate benchmark for an equity IRR?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
dd. In case benchmarks supplied by relevant national authorities selected is it applicable to the project activity and the type of IRR calculation presented?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
ee. In the cases of projects which could be developed by an entity other than the project participant is the benchmark applied based on publicly available data sources which can be clearly validated?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
ff. Have internal company benchmarks/ expected returns (including those used as the expected return on equity in the calculation of a weighted average cost of capital - WACC) been applied in cases where there is only one possible project developer?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK



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gg. In such cases, have these values been used for similar projects with similar risks, developed by the same company or, if the company is brand new, would have been used for similar projects in the same sector in the country/region?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
hh. Has a minimum clear evidence of the resolution by the company's Board and/or shareholders been provided to the effect as above?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
ii. Has a thorough assessment of the financial statements of the project developer - including the proposed WACC - to assess the past financial behavior of the entity during at least the last 3 years in relation to similar projects been conducted?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
jj. Does the risk premiums applied in the determination of required returns on equity reflect the risk profile of the project activity being assessed, established according to national/international accounting principles? (It is not considered reasonable to apply the rate general stock market returns as a risk premium for project activities that face a different risk profile than an investment in such indices.)	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
kk. Has an investment comparison analysis and	EB	Ann	Project comes under positive list of technology	OK	OK



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not a benchmark analysis used when the proposed baseline scenario leaves the project participant no other choice than to make an investment to supply the same (or substitute) products or services?	62	5	and hence qualifies the additionality.		
ll. Have variables, including the initial investment cost, that constitute more than 20% of either total project costs or total project revenues been subjected to reasonable variation (positive and negative) and the results of this variation been presented in the PDD and be reproducible in the associated spreadsheets?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
mm. Have a corrective action been raised for a variable to be included in the sensitivity analysis which constitute less than 20% and have a material impact on the analysis ?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
nn. Is the range of variations selected is reasonable in the project context?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
oo. Does the variations in the sensitivity analysis at least cover a range of +10% and -10%, unless this is not deemed appropriate in the context of the specific project circumstances?	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
pp. In cases where a scenario will result in the project activity passing the benchmark or becoming the most financially attractive	EB 62	Ann 5	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK


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alternative, is an assessment done of the probability of the occurrence of this scenario in comparison to the likelihood of the assumptions in the presented investment analysis, taking into consideration correlations between the variables as well as the specific socio-economic and policy context of the project activity?					
qq. Was the plant load factor defined ex-ante in the CDM-PDD according to one of the following options:	EB 62	Ann 5		-	-
i. The plant load factor provided to banks and/or equity financiers while applying the project activity for project financing, or to the government while applying the project activity for implementation approval?	EB 62	Ann 5	The project participant requested to clarify how PLF considered for the calculation of EG BL,Y in section B.6.3 of the PDD is arrived with reference of source.	(CL 6)	
ii. The plant load factor determined by a third party contracted by the project participants (e.g. an engineering company)?	EB 62	Ann 5	The project participant requested to clarify how PLF considered for the calculation of EG BL,Y in section B.6.3 of the PDD is arrived with reference of source.	(CL 6)	
rr. Was a thorough assessment of all parameters and assumptions used in calculating the relevant financial indicator, and determine the accuracy and suitability of these parameters using the available evidence and expertise in relevant	VVM	111	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK



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accounting practices conducted?					
ss. Were the parameters cross-checked against third-party or publicly available sources, such as invoices or price indices?	VVM	111	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
tt. Were feasibility reports, public announcements and annual financial reports related to the proposed CDM project activity and the project participants reviewed?	VVM	111	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
uu. Was the correctness of computations carried out and documented by the project participants assessed?	VVM	111	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
vv. Was the sensitivity analysis by the project participants to determine under what conditions variations in the result would occur, and the likelihood of these conditions assessed?	VVM	111	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
ww. Is the type of benchmark applied suitable for the type of financial indicator presented?	VVM	112	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
xx. Do any risk premiums applied determining the benchmark reflect the risks associated with the project type or activity?	VVM	112	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
yy. To determine this, was it assessed whether it is reasonable to assume that no investment would be made at a rate of return lower than the benchmark by:			Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
iii. assessing previous investment	VVM	112	Project comes under positive list of technology	OK	OK



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decisions by the project participants involved?			and hence qualifies the additionality.		
iv. determining whether the same benchmark has been applied?	VVM	112	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
v. determining if there are verifiable circumstances that have led to a change in the benchmark?	VVM	112	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
zz. Did the project participants rely on values from Feasibility Study Reports (FSR) that are approved by national authorities for proposed project activities?	VVM	113	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
xx. If yes:	VVM	113			
i. has the FSR been the basis of the decision to proceed with the investment in the project, i.e. that the period of time between the finalization of the FSR and the investment decision is sufficiently short for the DOE to confirm that it is unlikely in the context of the underlying project activity that the input values would have materially changed?	VVM	113	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
ii. Are the values used in the PDD and associated annexes fully consistent with the FSR?	VVM	113	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
iii. If not, was the appropriateness of the values validated?	VVM	113	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
iv. On the basis of its specific local and	VVM	113	Project comes under positive list of technology	OK	OK



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sectoral expertise, is confirmation provided, by cross-checking or other appropriate manner, that the input values from the FSR are valid and applicable at the time of the investment decision?			and hence qualifies the additionality.		
d. Barrier analysis					
a. Has barrier analysis been used to demonstrated the additionality of the proposed CDM project activity?	VVM	115	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
b. If yes, does the PDD demonstrate that the proposed CDM project activity faces barriers that:	VVM	115	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
i. prevent the implementation of this type of proposed CMD project activity?	VVM	115	Project comes under positive list of technology and hence qualifies the additionality.		
ii. do not prevent the implementation of at least one of the alternatives?	VVM	115	Project comes under positive list of technology and hence qualifies the additionality.		
c. Are there any issues that have a clear direct impact on the financial returns of the project activity, other than: risk related barriers, for example risk of technical failure, that could have negative effects on the financial performance; or barriers related to the unavailability of sources of finance for the project activity? {If yes, these issues cannot be considered barriers and shall be	VVM	116	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK



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assessed by investment analysis. [Refer to (6.c) above]}					
d. Were the barriers determined as real by:	VVM	117	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
i. assssing the available evidence and/or undertaking interviews with relevant individuals (including members of industry associations, government officials or local experts if necessary) to determine whether the barriers listed in the PDD exist?	VVM	117	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
ii. ensuring that existence of barriers is substantiated by independent sources of data such as relevant national legislation, surveys of local conditions and national or international statistics?	VVM	117	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
iii. Is existence of a barrier substantiated only by the opinions of the project participants? (If yes, this barrier cannot be considered as adequately substantiated)	VVM	117	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
e. Were the barriers determined as preventing the implementation of the project activity but not the implementation of at least one of the possible alternatives by applying local and sectoral expertise to judge whether a barrier or set of barriers would prevent the	VVM	117	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
implementation of the proposed CDM project activity and would not equally prevent implementation of <i>at least one of</i> the possible alternatives, in particular the identified baseline scenario?					
e. Common practice analysis					
a. Is this a large-scale, or first-of-its kind small-scale project activity?	VVM	118	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
b. If yes, was common practice analysis carried out as a credibility check of the other available evidence used by the project participants to demonstrate additionality?	VVM	118	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
c. Was it assessed whether the geographical scope (e.g. defined region) of the common practice analysis is appropriate for the assessment of common practice related to the project activity's technology or industry type? (For certain technologies the relevant region for assessment will be local and for others it may be transnational/global).	VVM	118	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
d. Was a region other than the entire host country chosen?	VVM	120	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
e. If yes, was the explanation why this region is more appropriate assessed?	VVM	120	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
f. Using official sources and local and industry expertise, was it determined to what extent	VVM	120	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
similar and operational projects (e.g., using similar technology or practice), other than CDM project activities, have been undertaken in the defined region?					
g. Are similar and operational projects, other than CDM project activities, already "widely observed and commonly carried out" in the defined region?	VVM	120	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
h. If yes, was it assessed whether there are essential distinctions between the proposed CDM project activity and the other similar activities?	VVM	120	Project comes under positive list of technology and hence qualifies the additionality.	OK	OK
7. Monitoring plan					
a. Does the PDD include a monitoring plan?	VVM	122	The web hosted PDD includes the description of monitoring parameters and monitoring plan in its section B.7.	OK	OK
b. Is this monitoring plan based on the approved monitoring methodology applied to the proposed CDM project activity?	VVM	122	The project participant has provided the monitoring plan in accordance with applied baseline and monitoring methodology AMS I D, version 17.	OK	OK
c. Were the list of parameters required by the the selected methodology identified?	VVM	123	The parameter required to be monitored as per the applied methodology is net electricity supplied by the project activity to grid, which is identified and included in the PDD.	OK	OK
d. Does the monitoring plan contains all necessary parameters?	VVM	123	The parameter required to be monitored as per the applied methodology is net electricity	OK	OK



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			supplied by the project activity to grid, which is identified and included in the PDD.		
e. Are the parameters clearly described?	VVM	123	Though the required parameter has been included in section B.7.1 of the PDD, the project participant is requested to clarify the followings: a) Appropriateness of the source of data for parameter $EG_{BL,Y}$. b) Description of measurement methods and procedures and QA/QC procedures are not explained explicitly in section B.7.1 of the PDD. c) Responsible entity for the data recording, calibration and calibration frequency is not consistent with the actual scenario observed/noted during site visit on 12/06/2012.	CL 7	
f. Does the means of monitoring described in the plan comply with the requirements of the methodology?	VVM	123	a) Mode of data archiving is not clear from section B.7 of the PDD. b) The overall process starting from power generation, evacuation and determination of the net power supplied by the project activity is not explicit from the web-hosted PDD.	CL 8	
g. Have all relevant parameters been monitored as indicated in the table of the methodology? PI state any	AMS	I.D	The parameter required to be monitored as per the applied methodology is net electricity supplied by the project activity to grid, which is	OK	OK


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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
deviations/omissions.			identified and included in the PDD.		
h. Has the CO2 emission factor of the grid electricity measured either by Combined Margin or by the Weighted Average emission?	AMS	I.D	The CO2 emission factor of the grid electricity is determined by the combined margin emission factor calculations based on the CEA database. This value has been fixed ex ante for the entire crediting period and hence will not be monitored ex post.	OK	OK
i. Has the CO2 emission factor of fossil fuel type i measured as per the .Tool to calculate project or leakage CO2 emissions from fossil fuel combustion."	AMS	I.D	There is no use of fossil fuel as the proposed project activity involves grid connected solar power plant based on photovoltaic technology. Hence, this is not applicable.	OK	OK
j. Has the Net calorific value of fossil fuel type i measured as per the .Tool to calculate project or a leakage CO2 emissions from fossil fuel combustion.	AMS	I.D	There is no use of fossil fuel as the proposed project activity involves grid connected solar power plant based on photovoltaic technology. Hence, this is not applicable.	OK	OK
k. Has the Quantity of fossil fuel consumed in year y measured as per the .Tool to calculate project or a leakage CO2 emissions from fossil fuel combustion.	AMS	I.D	There is no use of fossil fuel as the proposed project activity involves grid connected solar power plant based on photovoltaic technology. Hence, this is not applicable.	OK	OK
l. Has the Quantity of net electricity supplied to the grid in year y measured using energy meters.	AMS	I.D	The quantity of the net electricity supplied to the grid in year y is measured using energy meters of high accuracy class.	OK	OK
m. Is the quantity of net electricity supplied to the grid in year y monitored/recorded - Continuous monitoring, hourly measurement and at least monthly recording? Notes on measurement method:	AMS	I.D	The monitoring plan described in section B.7.1 and B.7.2 of the web hosted PDD does not clarify following 1. The cross checking mechanism and data	CAR 6	


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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
- Calibration should be undertaken as prescribed in the relevant paragraph of General Guidelines to SSC Methodologies. - If applicable, measurement results shall be cross checked with records for sold/purchased electricity (e.g., invoices/receipts) - The net electricity export/supplied to a grid is the difference between the measured quantities of the grid electricity export and the import. If applicable, cross check net electricity supplied to a grid as gross energy generation in the project activity power plant minus the auxiliary/station electricity consumption, technical losses and electricity import from the grid to the project power plant measured at the grid interface/connection used for billing purposes			uncertainty handling has not been described in section B.7.1 and B.7.2 of the PDD respectively. 2. Emergency preparedness is not mentioned in the PDD.		
n. Is the Quantity of biomass consumed in year y monitored/recorded Continuously or estimate using annual energy/mass balance? Notes on measurement method: - Use mass or volume based measurements. - Adjust for the moisture content in order to	AMS	I.D	There is no use of biomass fuel as the proposed project activity involves grid connected solar power plant based on photovoltaic technology. Hence, this is not applicable.	OK	OK


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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
determine the quantity of dry biomass. - And/or perform an annual energy/mass balance that is based on purchased quantities and stock. - For projects consuming biomass and fossil fuel to produce electricity, a specific energy consumption¹¹ of each type of fuel (biomass or fossil) to be used should be specified ex ante. The consumption of each type of fuel (biomass or fossil) shall be monitored. If fossil fuel is used, the electricity generation metered should be adjusted by deducting the electricity generation from fossil fuels using the specific energy consumption and the quantity of fossil fuel consumed. The amount of electricity generated using biomass fuels calculated then shall be compared with the amount of electricity generated calculated using specific energy consumption and amount of each type of biomass fuel used. The lower of the two values should be used to calculate emission reductions					
o. Is the Moisture content of the biomass residues monitored atleast on a monthly basis?	AMS	I.D	There is no use of biomass fuel as the proposed project activity involves grid connected solar power plant based on photovoltaic technology. Hence, this is not	OK	OK


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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
p. Is the weighted average of the moisture content calculated for each monitoring period and used in the calculations? Notes on measurement method: On-site measurements In case of dry biomass, monitoring of this parameter is not necessary	AMS	I.D	applicable. There is no use of biomass fuel as the proposed project activity involves grid connected solar power plant based on photovoltaic technology. Hence, this is not applicable.	OK	OK
q. Is Net calorific value of biomass residue type k monitored annually? Notes on measurement method: Measurement in laboratories according to relevant national/international standards. Measure the NCV based on dry biomass. Check the consistency of the measurements by comparing the measurement results with measurements from previous years, relevant data sources (e.g. values in the literature, values used in the national GHG inventory) and default values by the IPCC. If the measurement results differ significantly from previous measurements or other relevant data sources, conduct additional measurements	AMS	I.D	There is no use of biomass fuel as the proposed project activity involves grid connected solar power plant based on photovoltaic technology. Hence, this is not applicable.	OK	OK
r. Is the Standard deviation of the annual average historical net electricity generation delivered to the grid by the existing	AMS	I.D	There was not any exiting renewable plant prior to the project activity. The proposed project activity is green field grid connected	OK	OK



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
renewable energy plant that was operated at the project site prior to the implementation of the project activity calculated from data used to establish EG _{historical} ?			solar power plant based on photovoltaic thin film technology. Hence, this is not applicable.		
s. Is the parameters relevant to reservoir based hydro and geothermal plants monitored following the most recent version of ACM0002?	AMS	I.D	The proposed project activity is grid connected solar power plant based on photovoltaic thin film technology. Hence, this is not applicable.	OK	OK
t. Are the monitoring arrangements described in the monitoring plan feasible within the project design?	VVM	123	Refer to CLs mentioned above in this section of the protocol for inadequacy in section B.7 of the web hosted PDD.	-	-
u. Does the monitoring plan provide details regarding calibration of monitoring equipments/ instruments or does it include zero check as a substitute for calibration? (zero check can not be considered as a substitute for calibration)	EB 24	37	Refer to CLs mentioned above in this section of the protocol for inadequacy in section B.7 of the web hosted PDD.	-	-
v. Are the following means of implementation of the monitoring plan sufficient to ensure that the emission reductions achieved by/resulting from the proposed CDM project activity can be reported ex post and verified:	VVM	123		-	-
i. data management procedures?	VVM	123	Refer to 7.m above	-	-
ii. quality assurance procedures?	VVM	123	Refer to 7.m above	-	-
iii. quality control procedures?	VVM	123	Refer to 7.m above	-	-
8. Sustainable development					



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
a. Does the CDM project activity assists Parties not included in Annex I to the Convention in achieving sustainable development?	VVM	125	The project participant has not submitted the Host country approval of the party involved in the project activity.	(CL-1)	
b. Does the letter of approval by the DNA of the host Party confirm the contribution of the proposed CDM project activity to the sustainable development of the host Party?	VVM	126	The project participant has not submitted the Host country approval of the party involved in the project activity.	(CL-1)	
9. Local stakeholder consultation					
a. Were local stakeholders (public, including individuals, groups or communities affected, of likely to be affected, by the proposed CDM project activity or actions leading to the implementation of such an activity) invited by the PPs to comment on the proposed CDM project activity prior to the publication of the PDD on the UNFCCC website?	VVM	128	In Section E.1, PP has mentioned that the local stakeholders were invited through personal invitation sent on 07/11/2011. However the proceedings of the local stakeholder consultation meeting is not clear from section E.1 of the web-hosted PDD.	(CAR 5)	
b. Have comments by local stakeholders that can reasonably be considered relevant for the proposed CDM project activity been invited?	VVM	129	The comments by local stakeholders that can reasonably be considered relevant for the proposed CDM project activity been invited during local stakeholders' consultation meeting.	OK	OK
c. Is the summary of the comments received as provided in the PDD complete?	VVM	129	The summary of the comments are provided in section E.2 of the PDD.	OK	OK
d. Have the project participants taken due account of any comments received and	VVM	129	There was no negative comment received from the local stakeholders. The same was also	OK	OK



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
described this process in the PDD?			cross-checked by the validation team by interviewing the local stakeholders during the site visit on 12/06/2012.		
10. Environmental impacts					
a. Have the project participants submitted documentation on the analysis of the environmental impacts of the project activity?	VVM	131	The project activity being electricity generation using renewable source of energy, it does not require EIA to be conducted as per Ministry of Environment and Forests (MoEF), Government of India notification S.O. 1533 (E) dated 14/09/2006.	OK	OK
b. Have the project participants undertaken an analysis of environmental impacts?	VVM	132	Not applicable as commented above.	OK	OK
c. Does the host Party require an environmental impact assessment?	VVM	132	Ministry of Environment and Forests (MoEF), Government of India notification S.O. 1533 (E) dated 14/09/2006 does not require environment impact assessment of the proposed CDM project activity.	OK	OK
d. If yes, have the project participants undertaken an environmental impact assessment?	VVM	132	Not applicable	OK	OK

TABLE 2 SPECIFIC VALIDATION ACTIVITIES

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
1. Project design of small-scale clean development mechanism project activities					
a. Does the proposed small-scale project activity meet the requirements of the simplified modalities and procedures for small-scale CDM project activities?	VVM	133	The proposed CDM project activity involves solar energy based power plant with Solar photovoltaic thin film technology with installed capacity of 5 MW, which is the defined limit of the small scale project activity. Hence it meets the requirement of the simplified M & P of the SSC project activities.	OK	OK
b. Does the project activity qualify within the thresholds of the three possible types of small scale project activities? [Type (i) project activities: renewable energy project activities with a maximum output capacity equivalent to up to 15 megawatts; Type (ii) project activities: energy efficiency improvement project activities which reduce energy consumption, on the supply and/or demand side, by up to the equivalent of 15 gigawatt hours per year; Type (iii) project activities: other project activities that both reduce anthropogenic emissions by sources and directly emit less than 15 kilotonnes of carbon]	VVM	134	The project activity qualifies the thresholds of the 15 MW _{electrical} , as the proposed CDM project activity is Type I project involving implementation and operation of the 5 MW solar power plant including Solar Photovoltaic thin film technology.	OK	OK



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
dioxide equivalent annually.]					
c. Does the project activity conform to one of the approved small-scale categories?	VVM	134	The project activity conforms to the approved small-scale category of "Grid connected Solar PV Power Plant in Jodhpur, Rajasthan".	OK	OK
d. Does the project activity apply the relevant tool and methodology?	VVM	134	The project activity applies relevant methodology AMS I D, version 17 and "Tool to calculate emission factor for an electricity system".	OK	OK
e. Are the small-scale methodologies applied in conjunction with the general guidance to the methodologies, which provides guidance on equipment capacity, equipment performance, sampling and other monitoring-related issues?	VVM	134	The SSC methodology applied is found to be in conjunction with General Guidance to the SSC methodologies.	OK	OK
f. Is the project activity a debundled component of a large-scale project, i.e., is there a registered small-scale CDM project activity or an application to register another 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 proposed boundary of the proposed small-scale activity at the closest point?	VVM	134	The project activity is not de-bundled project activity of a large-scale project as this is the first CDM project of the project participant.	OK	OK
g. Is and assessment of the environmental impacts of the proposed CDM project activity	VVM	134	The host party does not require assessment of environment impact of the proposed CDM	OK	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
required by the host Party?			project activity.		
h. Is the project additional?	VVM	135	The project is additional in accordance with Attachment A to Appendix B, version 8.	OK	OK

VALIDATION REPORT

Table 3 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by validation team	Ref. To checklist question in Table 1 and 2	Summary of project owner response	Validation team conclusion
CAR 1 The methodological choice with respect to Para 12 of the applied methodology AMS-I.D. Version 17 is not clear from section B.6.1 of the web-hosted PDD.	Table 1 3.p.ii	PP Response-1: The emission factor is calculated ex-ante by using option (a) as per the paragraph 12 (a) of AMS.I.D (Version 17) i.e. as a conservative estimate of a combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM) according to the procedures prescribed in the 'Tool to calculate the emission factor for an electricity system' Version 2.2.1 (EB-63). The same has now been mentioned in section B.6.1 of the revised PDD.	Validation team conclusion:1 The project participant has chosen the option (a) as per the para 12 of AMS I.D version 17 i.e. combined margin and the same has been mentioned in the revised PDD. Hence, CAR 1 is Closed
CAR 2 The starting date of the proposed CDM project activity is provided as the date of release of Purchase Order for solar PV modules. This is as per the Glossary of terms (EB 41). However, start date mentioned in section C.1.1 of the webhosted PDD is not consistent with the date of first purchase order issued to Solar Frontier K.K.	Table 1 3.v.i	PP Response-1: The start date mentioned in section C.1.1 of the PDD has been corrected as 12/10/2011, which is the date of release of the first purchase order.	Validation team conclusion:1 The starting date of the proposed CDM project activity is provided as the date of release of Purchase Order for solar PV modules as 12/10/2011 in section C.1.1 of the revised PDD, which is in accordance with Glossary of terms(EB 41). Hence, CAR 2 is Closed



VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. To checklist question in Table 1 and 2	Summary of project owner response	Validation team conclusion
CAR 3 The maximum length of first crediting period and its renewal frequency is not clear from the section C.2.1 of the web hosted PDD.	Table 1 3.y	PP Response-1: The project activity will use renewable crediting period. The maximum length of the first crediting period will be 7 years and 0 months, and it will be renewed twice. The same is now mentioned in section C.2.1 of the PDD.	Validation team conclusion:1 In section C.2.1 of the revised PDD. PP indicated that the project activity will use renewable crediting period. The maximum length of the first crediting period will be 7 years and 0 months, and it will be renewed twice. Hence, CAR 3 is Closed
CAR 4 The starting date of the first crediting period of the project activity has been specified in the web-hosted PDD as 01/04/2012 which is not in accordance with the provisions of the CDM Modalities and Procedures.	Table 1 3.z	PP Response-1: The starting date of the first crediting period has been revised as 01/08/2012, which is in accordance with the provisions of the CDM modalities and procedures.	Validation team conclusion:1 The starting date of the first crediting period is mentioned as 01/08/2012 in the revised PDD and the same is in accordance with the provision of the CDM modalities and procedures. Hence, CAR 4 is Closed



VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. To checklist question in Table 1 and 2	Summary of project owner response	Validation team conclusion
CAR 5 In Section E.1, PP has mentioned that the local stakeholders were invited through personal invitation sent on 07/11/2011. However the proceedings of the local stakeholder consultation meeting is not clear from section E.1 of the web-hosted PDD.	Table 1 3.ff.i	PP Response-1: The proceedings of the local stakeholder consultation meeting are now mentioned in section E.1 of the PDD.	Validation team conclusion:1 The project participants has demonstrated the proceedings of the local stakeholder meeting in section E.1 of the PDD. The same has been cross checked with the minutes of meeting of local stakeholder submitted by PP. Hence, CAR 5 is Closed
CL 1 The project participant has not submitted the Host Country Approval of the party involved in the project activity.	Table 1 1.a	PP Response-1: PP has received the Host Country Approval from the DNA and the same has now been submitted to the DOE.	Validation team conclusion:1 PP has Submitted the Host Country approval Ref: 4/6/2012-CCC, dated 19/04/2012. to the validation team. The title in host country approval is same as title stated in PDD. Also, the letter of approval mentions that project contributes to sustainable development. The letter is unconditional with respect to party to the Kyoto Protocol, voluntary participation, contribution to sustainable development and title of project activity. The validation team confirms that this letter is in accordance with paragraphs 45 – 48 of VVM version 1.2. The host country



VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. To checklist question in Table 1 and 2	Summary of project owner response	Validation team conclusion
			approval also states name of project participant i.e. M/s Northwest Energy Private Limited. Hence, CL 1 is Closed
CL 2 In section B.5 of the PDD, PP has mentioned that the F-CDM form dated 06/12/2011 has been sent to UNFCCC and host party DNA within six months from the start date of the project activity i.e. 21/10/2011. The same has been cross checked with the UNFCCC website (http://cdm.unfccc.int/Projects/PriorCDM/notifications/index.html) and e-mail communication with UNFCCC and found that the Intimation has been received by the UNFCCC on 16/12/2011. However, the project participant to provide the acknowledgement of the prior consideration information received from the host country DNA.	Table 1 3.o.iii	PP Response-1: PP received acknowledgement from the DNA regarding receipt of prior consideration of CDM form via email dated December, 19, 2011. The same has been provided to the DOE. Further, the start date of the project is corrected as 12/10/2011 as per the first purchase order released.	Validation team conclusion:1 The project participants has sent the intimation to NCDMA (Indian DNA) on 16/12/2011 and received the acknowledgement from NCDMA (Indian DNA) on 19/12/2011. The same has been cross check with the e-mail communication submitted by project participants. Further, in response to CL 2 above, the start date of the project activity has been corrected in the PDD as 12/10/2011 instead of 21/10/2011 as stated in the webhosted PDD. Hence, CL 2 is Closed
CL 3 The description provided in section A.4.2 of the PDD indicates that the project activity involves	Table 1 4.a	PP Response-1: Technical specifications as	Validation team conclusion:1 The project participants has revised



VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. To checklist question in Table 1 and 2	Summary of project owner response	Validation team conclusion
solar panels of nominal power of 145Wp. However, it has been observed from the purchase order submitted by the project participant (dated 12/10/2011) refers to two types of the solar PV modules (155 Wp and 145 Wp) under the scope of supply. The details provided in the purchase order do not match with the information provided under section A.4.2 of the web-hosted PDD. Please clarify. In addition, the number of the PV modules being commissioned under each nominal power class is not clear from section A.4.2 of the web-hosted PDD.		mentioned in section A.4.2 of the PDD have been revised as per the type of modules installed at the commissioned plant, which has two types of solar PV modules (of nominal power 155Wp and 145Wp) installed. The same is also consistent with the information in the purchase order. Further, number of modules of each type installed at the commissioned plant has also been mentioned in section A.4.2 of the revised PDD.	the technical specification mentioned in section A.4.2 of the revised PDD, which is in consistent with the purchase order issued dated 12/10/2011 and observation made by validation team during site visit. The number of PV modules commissioned under each power class are also incorporated in section A.4.2 of the revised PDD. The same has been cross checked with the commissioning certificate dated 24/05/2012 issued by the EPC contractor. Hence, CL 3 is Closed
CL 4 The schematic project boundary diagram provided is not clear with respect to the electricity monitoring locations.	Table 1 5.c.b	PP Response-1: The project boundary diagram has been revised in section B.3 of the PDD and it now clearly mentions the electricity monitoring locations and evacuation of the electricity to the nearby grid substation.	Validation team conclusion:1 The project participants has revised the project boundary diagram and the same is now clear with respect to monitoring locations of the project activity. Hence, CL 4 is Closed



VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. To checklist question in Table 1 and 2	Summary of project owner response	Validation team conclusion
CL 5 The project participant has used version 6 of CEA database for calculation of emission factor which was not the valid version of CEA database at the time of PDD webhosting. Please clarify.	Table 1 5.d.b.iii	PP Response-1: The emission factor calculations have been corrected in the PDD by using version 7 of CEA database for calculation of emission factor, which was available at the time of webhosting of the PDD.	Validation team conclusion:1 The project participants has used the latest version of CEA database available i.e. version 07, which is applicable to the project activity at the time of Webhosting. Hence, CL 5 is Closed
CL 6 The project participant is requested to clarify the source of PLF considered for the calculation of $EG_{BL,Y}$ in section B.6.3 of the PDD.	Table 1 5.d.h.i	PP Response-1: An independent third party agency had carried out the energy generation assessment study, which provides the PLF at the project site. The same has been used to calculate electricity generation from the plant. Reference of the same has also been included in the PDD.	Validation team conclusion:1 PP has submitted the third party energy generation assessment report prepared by Suncraft Energy Private Limited, which provide the PLF of the project site as 20.47%. The same is now mentioned in the revised PDD with reference of source. Hence CL 6 is Closed
CL 7 Description of measurement methods and procedures and QA/QC procedures are not explained explicitly in section B.7.1 of the PDD.	Table 1 7.e	PP Response-1: Section B.7.1 of the PDD has been revised to include the description of measurement methods and procedures and QA/QC procedures.	Validation team conclusion:1 Description of measurement methods, measurement procedures and QA/QC procedures are explained explicitly in section B.7.1 of the PDD. Hence, CL 7 is Closed



VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. To checklist question in Table 1 and 2	Summary of project owner response	Validation team conclusion
CL 8 (a) Mode of data archiving is not clear from section B.7 of the PDD. (b) Data Uncertainty and emergency preparedness are not clearly stated in section B.7.2 of the PDD.	Table 1 7.f	PP Response-1: a) The data will be archived electronically as well as in log books at the power plant. The same has now been mentioned in section B.7 of the PDD. b) In case Main meter or check meter is found to be outside the acceptable limits of accuracy or faulty or not functioning properly, it will be repaired, recalibrated or replaced as soon as possible. In the event that the Main meter is not in service as a result of maintenance, repairs or testing, the check meter will be used. The same has now been mentioned as Data uncertainty and emergency preparedness	Validation team conclusion:1 a) Project participant has indicated that the data will be archived electronically as well as in log books at the power plant and the same is mentioned in section B.7.2 of the revised PDD. Hence, CL 8 (a) is Closed Validation team conclusion:1 b) The data uncertainty and emergency preparedness has been explained explicitly in section B.7.2 of the revised PDD. Hence, CL 8 (b) is Closed.



VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. To checklist question in Table 1 and 2	Summary of project owner response	Validation team conclusion
		plan in section B.7.2 of the PDD.	



APPENDIX B: COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

According to the modalities for the Validation of CDM projects, the DOE shall make publicly available the project design document and receive, within 30 days, comments from Parties, stakeholders and UNFCCC accredited non-governmental organizations and make them publicly available.

BUREAU VERITAS CERTIFICATION published the project documents on the UNFCCC CDM website (<http://cdm.unfccc.int>) on 10/02/2012 and invited comments within 10/03/2012 by Parties, stakeholders and non-governmental organizations. The table below describes how due account of the comments received for the CDM project “Grid connected Solar PV power plant in Jodhpur, Rajasthan” by NorthWest Energy Private Limited was taken by Bureau Veritas Certification.

Sr. No.	Details of the commenter	Date of Comment	Comment [unedited]	Response by project participant	Explanation on how account is taken by DOE
1	Krystopher		DOE to ensure that the PDD values are consistent and ensure that the CDM project is a genuine project.	All the values in the CDM PDD are consistent and the DOE could validate the same.	All the values provided in the PDD are consistent and the same has been crosschecked with the documents submitted by PP. Hence the query has been closed
2	Krystopher		DoE to check the Detailed Project Report and Feasibility Report which is submitted to the other agencies and Banks by Project owner and ensure that the values match with the DPR/FR submitted to DoE	There was no DPR prepared for the project activity. Hence the comment is not applicable	There were no DPR prepared for the project activity. An energy generation



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			also.	to the project activity.	assessment report has been prepared by the PP and the same is submitted and reviewed by validation team. Hence the query has been closed
3	Krystopher		Careful study must be done so that the DPR/FR is not in different versions made and submitted with different purposes to different agencies, which is totally unacceptable, illegal and unethical.	There was no DPR prepared for the project activity. Hence the comment is not applicable to the project activity.	There were no DPR prepared for the project activity. An energy generation assessment report has been prepared by the PP and the same is submitted and reviewed by validation team. Hence the query has been closed
4	Krystopher		Project owner should show some undertaking letter from bank manager to DoE stating that both DPR's are same. These kinds of letters should not be accepted and entertained by DoE at face value, but must be checked independently. While collecting the DPR/FR from banks and other agencies, all DPR/FR pages should be counter signed by Banks and other	There was no DPR prepared for the project activity. Hence the comment is not applicable to the project activity.	There were no DPR prepared for the project activity. An energy generation assessment report has been prepared by the PP and the



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			agencies so that the real DPR/FR given to other parties by the PP/Consultant is same as the one submitted to DOE.		same is submitted and reviewed by validation team. Hence the query has been closed
5	Krystopher		DPR/FR values must be probed fully. DOE must take a written undertaking from the PP/Consultant about the list of parties to whom this DPR/FR is submitted and for what purposes. Then DOE should cross check with all the parties and confirm that the same DPR/FR is submitted to all the parties correctly without any changes. DOE must not accept any reports and undertakings from PP/Consultant. DOE must make independent evaluation and use totally different parties without informing the PP or Consultant to cross check the facts.	There was no DPR prepared for the project activity. Hence the comment is not applicable to the project activity.	There were no DPR prepared for the project activity. An energy generation assessment report has been prepared by the PP and the same is submitted and reviewed by validation team. Hence the query has been closed
6	Krystopher		DOE to write to the party who prepared the DPR/FR which is submitted to the banks and other agencies and the same is verified against the one submitted to the DOE by PP/Consultant.	There was no DPR prepared for the project activity. Hence the comment is not applicable to the project activity.	There were no DPR prepared for the project activity. An energy generation assessment report has been prepared by the PP and the same is submitted and reviewed by validation team.



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					Hence the query has been closed
7	Krystopher		DOE must not entertain this project any more if found the DPR/FR is tampered with at any point in time. PP can not give different DPR's and FR's. They must submit only the one given to Banks and other agencies while obtaining loans and decision making time.	There was no DPR prepared for the project activity. Hence the comment is not applicable to the project activity.	There were no DPR prepared for the project activity. An energy generation assessment report has been prepared by the PP and the same is submitted and reviewed by validation team. Hence the query has been closed
8	Krystopher		Has the PP considered the CDM revenues while envisaging the project? Without CDM the project was not viable, is it right? This project is having a debt component? Then how bankers or lenders gave the loan? Have the bankers or lenders considered the CDM revenues while agreeing to give loan to this projects? If not this project should be rejected right away by DOE by terminating the contract forthwith. If yes, where is the proof? What is the date of the evidence document from bank? Is this document printed now a days or earlier. DOE to independently check the same. If the document is available from Bank it must be checked from all angles so that it is	In line with the CDM EB decision referred in Attachment A of Appendix B (EB 63, Annex 24) of the Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activity categories, the project is automatically additional and hence the project proponent is not required to do the	The proposed project activity is automatically additional as the project activity comes under positive list of technology, which is defined in Attachment A of Appendix B (EB 63, Annex 24) of the Indicative simplified baseline and



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			genuine and not forged and date changed by putting back dated. This is normally done, DOE to be aware of this please. Please check the communication the PP had during that time with banks, emails and postal receipts and the weights and dates mentioned on the receipts. Do not believe in courier bills and receipts since these can be cooked up easily. Insist on government owned postal service receipts only. If the project is fully equity project then on what basis the PP has invested full equity in to the project while considering the CDM revenue? DOE to check the same in detail and bring out the facts. Is there any past record of this PP to invest or not to invest at returns what he is talking about in this project? Proper evidences must be reviewed and digged out by the DOE and take decision on the project based on established facts. Do not ask documents from PP, DOE to collect the same from different sources to do independent evaluation.	investment analysis to prove the additionality.	monitoring methodologies for selected small-scale CDM project activity categories. Hence investment analysis is not required to prove additionality. Hence the query has been closed
9	Krystopher		Is the project equipment purchased second hand equipment or sourced from cheap foreign sources? If yes, the issue must be probed by DOE since invoices will invariably be inflated and forged. Total project costs mentioned by PP will not be the same as originals. Hence no additionality. These facts must be probed in full by DOE by checking all documents and	All the equipments installed at the commissioned plant are newly purchased and are not second hand.	All the equipments installed at the project site are newly purchased. The same has been cross checked with the purchase order



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			money transactions along with bank statements and certified accounts by a legally acceptable financial analyst.		issued to Solar frontier K.K dated 12/10/2011. However, validation team observed that the type of solar panels mentioned in the webhosted PDD is not consistent with the type of solar panels mentioned in purchase order. Hence, CL 3 was raised and the same is closed when PP updated the section A.4.2 of the PDD. The query has been closed.
10	Krystopher		From DOE side which auditor has done marketing and business development for acquiring this business of validating this project? With whom he or she was co-ordinating at PP or CER buyer? The same person who has done the marketing and business development to acquire the business do validation or participate in any manner what so ever in the validation process? One	The comment is a generic one challenging the validation procedures followed by the DOE, and hence the comment is not specific to the project activity in consideration.	The DOE is not involved in marketing. Request for quotation for validation service was received by the PP and the DOE


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			cannot do like that. It is against the accreditation rules and norms followed since ages. DOE should send auditors from different offices or countries to do this validation audit. DOE must take care of impartiality and accreditation rules. Due to the targets set by the DOE managements auditors are doing marketing and meeting clients and giving promises that the project will be taken care. Is it acceptable and fair? This must be stopped. No auditor should do marketing. Only non-auditing staff should do marketing. DOE to ensure the same please.		submitted a proposal for validation.
11	Krystopher		If applicable only: Is these machines, equipment was a part of any bundle of CDM activity envisaged and developed earlier. DOE to check the same through independent sources also. Once some bundles are non-additional and getting negative validation from a DOE, PP is rolling out the same project as an individual project which is not a CDM project at all. DOE to verify the same from independent sources and also take undertaking in the form of an affidavit from the PP's that any misrepresentation or false statement with respect this would attract strict legal action from UNFCCC and DOE. Furthermore the registered project must be de-registered in case of any future findings contradicting the submissions made by the project owner.	The equipments including the solar PV modules installed in the plant were envisaged for this particular project activity and were not part of any bundle of CDM activity.	The equipments installed in the project activity are new equipments as verified from the purchase orders and they were not a part of any bundle CDM project activity.



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12	Krystopher		If applicable only: Is these machines, equipment was a part of any bundle of CDM activity envisaged and developed earlier. DOE to check the same through independent sources also. Once some bundles are non-additional and getting negative validation from a DOE, PP is rolling out the same project as an individual project which is not a CDM project at all. DOE to verify the same from independent sources and also take undertaking in the form of an affidavit from the PP's that any misrepresentation or false statement with respect this would attract strict legal action from UNFCCC and DOE. Furthermore the registered project must be de-registered in case of any future findings contradicting the submissions made by the project owner. DOE to be more careful so that this is a genuine CDM project. What is the exact project cost? The project cost is covering what? Each value considered must be validated with proof. The machinery is second hand purchased or fresh and new from an OEM? In either case DOE to check all the quotations, proposals, purchase orders, invoices, way bills, transport bills, proof of payments like bank statements. DOE to check with banks by way of written confirmation the amount transacted, to whom the money is paid, when the money is paid, is the party paid is the correct party as	These comments have been repeated and have been already answered above.	The equipments installed in the project activity are new equipments as verified from the purchase orders and they were not a part of any bundle CDM project activity.



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			shown in the purchase orders. It may so happen that the values, party names, dates are fabricated and misrepresented in this project. DOE should terminate their contract for this project immediately. This is the only way out to protect the value of CDM process. If the PP is purchasing second hand or second quality equipment and inflating the purchase order values and invoices, this must be probed thoroughly and real values to taken for additionality calculation. Then I'm sure the additionality is not there at all in such a situation.		
13	Krystopher		How is the base line defined in this project? Is Base line hypothetically defined with no proper evidences and proper justification? In such case, DOE cannot take the base line as suggested by the PDD. Please check that there are real emission reductions beyond the real and factual base line. It may so happen that this project qualifies for no CER's. DOE cannot assume values and things as giving by this PP. Whatever values are considered throughout the project in all documents including the real DPR (not the one prepared for CDM, the one given to the banks and others), they must be validated, verified and double checked. Do not ask PP for DPR. Ask the parties who have been given DPR by the PP. Get directly from the bank and others by each page of the	<i>According to the guidelines of the applicable small scale methodology AMS.I.D (Version 17), "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." Hence the</i>	The project activity is a new Greenfield project and hence the baseline is defined by the methodology itself. As per EB guideline, the project activity is not required to demonstrate additionality and hence the DPR values have not been used by the PP since



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			DPR and Feasibility report signed. Such document can be considered as a real DPR or FR. UNFCCC CDM process cannot be degraded by fabricating and misinterpreting the project base line and additionality.	<i>baseline has been determined in line with the guidelines of the applicable small scale methodology. Further, there was no DPR prepared for the project activity, hence the comments related to the DPR are not applicable for the project activity.</i>	the PLF is also taken from the third party assessment report.
14	Krystopher		Do send some auditors who are not in the business development and marketing with the PP. Bureau Veritas should depute a team for any audit who is not involved in the marketing with the client. Bureau Veritas now a days is doing CDM audits in very short time and giving reports. Why and how? What has changed? Overnight have they become very knowledgeable? Same people, same systems and their attitude towards CDM validation has changed and BV auditors are giving request for registration without checking the full particulars of the project. Why the sudden change in attitude? Auditors want to milk CDM and spoil CDM system and then go for their regular inspection and ISO certification stuff when CDM dies? Because of DOE's like this only CDM is going to dogs. Auditors like HB Muralidhara, Sanjay	The comment is a generic one challenging the validation procedures followed by the DOE, and hence the comment is not specific to the project activity in consideration.	The DOE is not involved in marketing. The DOE had only sent a proposal for conducting validation after receiving a written request from the PP.



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			Patankar and other likeminded auditors in BV are going very fast on CDM projects of their choice and certifying in a great hurry. Why? Bureau Veritas management should probe this? If BV management does not take real interest and keep the house in order, UNFCCC should check this issue. Why BV's all old projects which are published for comments in 2007 and 2008 are getting request for registration all of a sudden? What clients have shown and given off late which they have not done in the last 3 years or so? What is this? What is happening? What kind of TR is being done? Is TR done just for the sake of doing or is TR raising any true and genuine issues? HB Muralidhara and Sanjay Patankar should not be used for any large scale projects as LA as their independence is definitely questionable. They should be used only for TR and some "independent and new to consultants and large group companies" auditors to be used as LA's. At least both of them should be sent to Inspection to save BV's reputation on CDM business. BV auditors relationship with some of the big group of companies in India & other countries and some consultants is questionable and brings disrepute to CDM process. Names need not be written, everyone knows including BV's management. If no credible corrective actions are initiated immediately by BV's management then we have no other option		



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			except to come out openly with names of companies and consultants with whom BV is involved in wrong activities. How come HB Muralidhara and Sanjay Patankar do audits for clients and consultants when both are doing marketing and seeking business from market? Is this allowed in any third party certification business? Why BV is flouting rules, for disgrace? Why BV's auditors themselves are giving suggestions how to close CAR's and CL's for CDM projects? Why they are advising corrective actions? Is it acceptable? BV's management and UNFCCC should look into this matter and correct the things immediately in the interest of CDM process. Flavio Gomes is fit for counting revenues and does not have a proper oversight on his own business operations area, which is proven effectively now. It's time to set the business in order. Copy marked to UNFCCC.		