



VALIDATION REPORT DREISATZ MySOLAR24 (P) LTD.

VALIDATION OF THE SOLAR PV POWER PROJECT BY DMPL IN FATEPUR, GUJARAT

REPORT No.INDIA-VD/523.49/2012

REVISION No.01

BUREAU VERITAS CERTIFICATION

62/71 Boulevard du Château
92571 Neuilly Sur Seine Cdx - France



VALIDATION REPORT

Date of first issue: 24/11/2012	Organizational unit: Bureau Veritas Certification Holding SAS
Client: Dreisatz MySolar24 (P) Ltd.	Client ref.: Mr. Jay Shankar Shukla

Summary:

Bureau Veritas Certification has conducted the validation of "Solar PV Power Project by DMPL in Fatepur, Gujarat" owned by Dreisatz MySolar24 (P) Ltd., which is located in Village: Fatepur, Taluka: Dasada, District: Surendranagar, State: Gujarat, Country: 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 document and additional background documents; 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 Requests, Corrective Actions Requests, and Forward Actions Requests (CLs, CARs and FARs), 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 all relevant UNFCCC requirements for the CDM and the relevant host country criteria. Bureau Veritas Certification thus requests the registration of the project as a CDM project activity.

Report No.: INDIA-VD/523.49/2012	Subject Group: CDM
Project title: Solar PV Power Project by DMPL in Fatepur, Gujarat	
Work carried out by: Mr. V. Senthil Kumar - Team Leader Mr. Rakesh Tripathi - Team Member	
Internal Technical Review carried out by: Mr. Sanjay Patankar	
Date of this revision: 20/12/2012	Rev. No.: 01
Number of pages: 95	

Indexing terms

Work approved by:

Flavio Gomes

☒ No distribution without permission from the Client or responsible organizational unit

☐ Limited distribution

☐ Unrestricted distribution



Abbreviations

BVCH	Bureau Veritas Certification Holding SAS
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reductions
CL	Clarification Request
CO2	Carbon Dioxide
CO2e	Carbon Dioxide Equivalent
DNA	Designated National Authority
DOE	Designated Operational Entity
GERC	Gujarat Electricity Regulatory Commission
FAR	Forward Action Request
GHG	Green House Gas(es)
LoA	Letter of Approval
MoV	Means of Verification
MP	Monitoring Plan
PDD	Project Design Document
PLF	Plant Load Factor
PP	Project Participant
PPA	Power Purchase Agreement
UNFCCC	United Nations Framework Convention on Climate Change
DNA	Designated National Authority
VVS	Validation and Verification Standard



Table of Contents	Page
1. INTRODUCTION	5
1.1. Objective	5
1.2. Scope	5
1.3. Validation Team	5
2. METHODOLOGY	6
2.1. Review of Documents	6
2.2. Follow-up Interviews	6
2.3. Resolution of Clarification, Corrective and Forward Action Requests	7
2.4. Internal Technical Review	7
3. VALIDATION CONCLUSIONS	8
3.1. Approval (43-44)	8
3.2. Authorization (49)	9
3.3. Sustainable Development (52)	9
3.4. Modalities of Communications (58,61)	10
3.5. Project Design Document (63)	10
3.6. Changes in the Project Activity (17)	10
3.7. Project Description (69)	12
3.8. Baseline and Monitoring Methodology	14
3.8.1. Applicability of the selected Methodology (77)	14
3.8.2. Project Boundary (86-87)	17
3.8.3. Baseline Identification (94-95)	18
3.8.4. Algorithms and/or Formulae used to determine Emission Reductions (99-100)	19
3.9. Additionality (104)	22
3.9.1. Prior consideration of the Clean Development Mechanism (112)	23
3.9.2. Identification of Alternatives (116)	24
3.9.3. Investment Analysis (123)	24
3.9.4. Barrier Analysis (127)	26
3.9.5. Common Practice Analysis (130)	26
3.10. Monitoring Plan (133)	26
3.11. Environmental Impacts (137)	29
3.12. Local Stakeholder Consultation (140)	29
4. COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS	30
5. VALIDATION OPINION	31
6. REFERENCES	32
7. CURRICULA VITAE OF THE DOE'S VALIDATION TEAM MEMBERS	34
APPENDIX A: CDM PROJECT VALIDATION PROTOCOL	36



1. INTRODUCTION

Dreisatz MySolar24 (P) Ltd. has commissioned Bureau Veritas Certification to validate its CDM project "Solar PV Power Project by DMPL in Fatepur, Gujarat" (hereafter called "the Project") at Village: Fatepur, Taluka: Dasada, District: Surendranagar, State: Gujarat, Country: 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 objective of a validation is to provide a thorough and independent third party assessment of the project design. In particular, the project's baseline, the monitoring plan, 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 applicable CDM requirements and the identified criteria. Validation is a requirement for all CDM projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of certified emission reductions (CERs).

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 the requirements of paragraph 37 of the CDM M&Ps, the applicability conditions of the selected methodology and guidance issued by the Board.

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

1.3. Validation Team

The assessment team and internal technical reviewer team consist of the following personnel:

FUNCTION	NAME	TA 1.2	TA X.X	TASK PERFORMED*
Team Leader	Mr. V. Senthil Kumar	☒	☐	☒ DR ☐ SV ☒ RI ☐ TR
Team Member	Mr. Rakesh Tripathi	☒	☐	☒ DR ☒ SV ☐ RI ☐ TR
Technical Specialist	N.A.	☐	☐	☐ DR ☐ SV ☐ RI ☐ TR
Internal Technical Reviewer (ITR)	Mr. Sanjay Patankar	☒	☐	☐ DR ☐ SV ☐ RI ☒ TR
Specialist	Mr. H. B.	☒	☐	☐ DR ☐ SV ☐ RI ☒ TR



supporting ITR	Muralidhar			
-----------------------	------------	--	--	--

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

2. METHODOLOGY

The overall validation, from Contract Review to Verification 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 03.0 of the Clean Development Mechanism Validation and Verification Standard, issued by CDM Executive Board at its 70th meeting on 23/11/2012 (Ref /25/). 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 Dreisatz MySolar24 (P) Ltd. and additional background documents related to the project design and baseline i.e. Country Law, Guidelines for Completing the Project Design Document (CDM-PDD), approved methodology, Kyoto Protocol, Clarifications on Validation Requirements to be Checked by a Designated Operational Entity were reviewed.

Furthermore, cross checks were made between information provided in the PDD and information from sources other than those used, the DOE's sectoral expertise and, independent background investigations.

To address Bureau Veritas Certification corrective action and clarification requests, Dreisatz MySolar24 (P) Ltd revised the PDD and resubmitted it on 23/11/2012.

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

2.2. Follow-up Interviews

On 27/08/2012, Bureau Veritas Certification performed a site visit and interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of Dreisatz MySolar24 (P) Ltd were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
--------------------------	------------------



Dreisatz MySolar24 (P) Ltd (the Project Owner)	➤ Project background information and CDM consideration. ➤ Project technology, operation and maintenance. ➤ Project approval and implementation status. ➤ Project management and monitoring plan. ➤ Stakeholder consultation process. ➤ Government policies related to the project activity.
Local Stakeholder	➤ Project background in details ➤ Stakeholder comments ➤ Social and environmental impact of the project ➤ Confirmation of local stakeholders' consultation meeting conducted by Dreisatz MySolar24 (P) Ltd
KPMG, India (the Consultant)	➤ Applicability of selected methodology. ➤ Baseline determination. ➤ Emission reductions calculation. ➤ Emission reduction monitoring plan.

2.3. Resolution of Clarification, Corrective and Forward Action Requests

The objective of this phase of the validation is to resolve issues that require further elaboration, research or expansion prior to Bureau Veritas Certification's positive conclusion on the project design.

A Corrective Action Request (CAR) is raised, if one of the following situations occurs:

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

A Clarification Request (CL) is raised, if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

A Forward Action Request (FAR) may also be raised during validation, to identify issues related to project implementation that require review during the first verification of the project activity.

To guarantee the transparency of the validation process, the issues raised, the responses provided by the project participants, the means of validation of such responses and references to any resulting changes in the PDD or supporting annexes are documented in the Validation Protocol in Appendix A of this report.

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 Team Leader 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 and CLs during the validation exercise, review of sample documents.

The reviewer may raise Clarification Requests to the validation team and will discuss these matters with the Team Leader.

After the agreement of the responses to the Clarification Requests from the validation team as well as the PP(s), the finalized validation report is accepted for further processing such as uploading via the UNFCCC interface.

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, Corrective and Forward 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 CAR(s), 11 CL(s) and 00 FAR(s).

The CARs and CLs were closed out 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 corresponds to the VVS paragraph.

3.1. Approval (43-44)

The letters of approval have been received and the following support documentation has been verified by Bureau Veritas Certification:



The DNA of India has issued a Letter of Approval (Ref-No 4/16/2012-CCC) on 06/11/2012 authorizing Dreisatz MySolar24 (P) Ltd as the Project Participant and confirms that the Project contributes to India's Sustainable development. (Ref-15)

At the start of the validation Letter of Approval from the Host Party DNA was not provided by the project participant hence CL 9 was raised. In response to the clarification raised project participant provided the Letter of Approval with Ref-No 4/16/2012-CCC dated 06/11/2012, the Letter of Approval was assessed and cross checked hence the validation team closed the CL 9.

Bureau Veritas Certification received these letters of approval from the project participant, the letter of approval issued by a Government entity "Ministry of Environment and Forests" and hence, the validation team does not doubt the letters' authenticity.

In accordance with para. 39 – 42/VVS, Bureau Veritas Certification considers that:

- (a) Each letter confirms the Party is a Party to the Kyoto Protocol;
- (b) Each letter confirms the participation is voluntary;
- (c) In the case of the host Party, the letter confirms that the proposed project activity contributes to the sustainable development of the country;
- (d) Each letter refers to the precise proposed project activity title in the PDD being submitted for registration.
- (e) The letter(s) of approval is unconditional with respect to the items above.
- (f) The letter(s) of approval has been issued by the respective Party's DNA and is valid for the proposed project activity under validation.

3.2. Authorization (49)

The participation of project participant has been authorized by a Party of the Kyoto Protocol. 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 M/s. Dreisatz MySolar24 (P) Ltd as the project participant and this participation is approved by DNA vide a Letter of Approval with Ref-No: 4/16/2012-CCC Dated:06/11/2012 Ref /15/. Based on the Letter of Approval the validation team confirms that the participation has been approved by a Party to the Kyoto Protocol (National CDM Authority, Government of India). The validation team does not doubt the authenticity of the letter of approval as the same has been issued on the official letterhead of the Government of India; Ministry of Environment and Forest, signed by Deputy Secretary Climate Change Ref No: 4/16/2012-CCC Dtd:06/11/2012. 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 activity contributes to sustainable development.



3.3. Sustainable Development (52)

The host Party's DNA has confirmed the contribution of the Project to the sustainable development of the host Party. Please refer to section 3.1 of this report.

3.4. Modalities of Communications (58,61)

The validation team has performed due diligence on the MoC statement and validated the corporate identity of all project participants and focal points included in the Modalities of Communication (MoC) statement, as well as the personal identities, including specimen signatures and employment status, of their authorized signatories.

CL 11 was raised, as the project participant had not provided the Modalities of Communication (MoC) for the project activity. In response, project participant has provided the duly signed Modalities of Communication (MoC) and also updated the contact person mentioned in Annex-I of the webhosted PDD in accordance with the Modalities of communication, hence the validation team closes the CL 11.

Bureau Veritas Certification confirms that the MoC statement complies with all relevant forms and requirements.

3.5. Project Design Document (63)

Bureau Veritas Certification hereby confirms that the PDD complies with the latest forms of the guidance documents for completion of PDD.

3.6. Changes in the Project Activity (17)

During the site visit on 27/08/2012, no physical changes pertaining to the project design was observed as compared to details mentioned in the webhosted PDD.

The major differences between the final version PDD and the webhosted PDD are listed in Table 2 below:

Table 2 Changes between the final PDD and the webhosted PDD

Item	PDD version 01 (Webhosted)	PDD version 02 (Final)	Validation Opinion
Section A.1	Total GHG emission reductions for the chosen crediting period was not mentioned in section A.1 of the PDD.	In final PDD Total GHG emission reductions for the chosen crediting period is now provided as 165,893 tCO ₂ in section A.1.	The Total GHG emission reduction for the chosen crediting period is provided as 165,893 in section A.1 of the PDD, in accordance with EB 66, Annex 9. Hence acceptable to the validation team and CAR 1 is closed which was raised with respect



			to the webhosted PDD.
Section A.3	Information regarding Monitoring equipments and their location was not provided in section A.3 of the Webhosted PDD.	Project participant has provided the information regarding Monitoring equipments and their location in section A.3	The information regarding Monitoring equipments and their location in section A.3, the same was noted during interview with project representative, hence accepted by validation team and CAR 2 is Closed which was raised with respect to the webhosted PDD.
Section A.3	Project participant has not provided the source for the life time of the project activity and also for the newness of the equipments	Project participant has provided the technical specification of the solar modules, which indicate the life of the project activity as 25 years and also revised the rated capacity of the panels to be installed at the site in accordance with purchase order raised to Module manufacturer.	Project participant has provided the technical specification of the solar modules, which indicate the life of the project activity as 25 years and also revised the rated capacity of the panels to be installed at the site in accordance with purchase order raised to Module manufacturer. The validation accepts the change in the PDD, as the capacity of the project activity is 15 MW and the technical specification mentioned in the PDD is consistent with DPR and Purchase Order. CL 1 is closed which was raised with respect to the webhosted PDD
Section B.6	The Plant load factor of 18.929% mentioned in webhosted PDD was not supported with relevant documents	The project participant has revised the PDD and mentions the Plant Load Factor of 20.524%, which is sourced from simulation study for estimated generation done by third party i.e Arbutus Consultants Private	The validation team is not able to conclude on why PLF was high during the second time of assessment for the same site even though the capacity of solar panels were similar between the two suppliers, hence as a conservative approach



		Limited (Ref /16/). Hence in accordance with EB 48, Annex 11	PLF of 18.929% was considered the validation team, hence CL 6 was closed.
Section B.7	The project participant had not provided the location of the measuring instruments, emergency preparedness and procedure adopted for determining the net electricity supplied to the grid, in case the date of registration does not match with the billing cycle.	The project participant has revised the section B.7 and provided all the relevant information.	The project participant has revised the section B.7 and the same was consistent with the procedure noted during interview with the project representatives. Hence, accepted by the validation team and CL 7 and CL 8 is closed which was raised with respect to webhosted PDD
Section C.2.2	The start date of the crediting period mentioned was already ceased	The project participant has revised the start date of the crediting period as 24/12/2012, which is in accordance with provisions of the CDM Modalities and Procedures.	The project participant has mentioned the start date of the crediting period as 24/12/2012, which is in accordance with provisions of the CDM Modalities and Procedures. Hence, accepted by the validation team and CAR 5 is closed which was raised with respect to webhosted PDD.

3.7. Project Description (69)

The proposed CDM Project Activity involves installation and operation of a grid connected 15 MW solar PV based power plant located in Village: Fatepur, Taluka: Dasada, District: Surendranagar, State: Gujarat, Country: India, which has geographical coordinates of North Latitude 23°25'23.69" (UTM: 23.42325) and East Longitude 71°37'5.41" (UTM: 71.63639).

The proposed CDM project activity is a Greenfield project and generates electricity using solar energy, which is a renewable source, and hence does not result in any greenhouse gas (GHG) emissions during its operation. The validation team reviewed the copy of Consent to Establish issued by "Gujarat Pollution Control Board" dated 03/05/2012 (Ref /8/) for setting up plant. 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 conducted by one member of validation team on 27/08/2012 to the project site at Village: Fatepur, Taluka: Dasada, District: Surendranagar, State: Gujarat, Country: India. The major

equipments proposed to be installed at the site of the proposed CDM project activity as observed during the on-site visit and document review is as follows –

Sr. no.	Specifications	Details	Cross-checking document
1	Technical specifications of modules to be installed at the site	Make: Trina Nominal power: 235 Wp No of Modules: 4,944 Calculated Installed Capacity: $4,944 \times 235 \text{ Wp} = 1.16184 \text{ MWp}$	Purchase Order Released by the project participant i.e. Dreisatz MySolar24 (P) Ltd to Trina Solar Energy Development PTE Limited (Ref P/9/)
2		Make: Trina Nominal power: 245 Wp No of Modules: 56,448 Calculated Installed Capacity: $56,448 \times 245 \text{ Wp} = 13.829760 \text{ MWp}$	Purchase Order Released by the project participant i.e. Dreisatz MySolar24 (P) Ltd to Trina Solar Energy Development PTE Limited (Ref P/9/)

The capacity of the proposed project activity mentioned in the web hosted PDD is 15 MW and the same has been cross checked with the clearances obtained from the Government entity (Consent to Establish issued by Gujarat Pollution control Board dated 03/05/2012) (Ref P/8/), The validation team has also verified the capacity of the project activity by multiplying the number of modules with rated output of the PV Modules defined by the manufacturer and is tested at standard test conditions (STC) which is in line with the requirement of “General Guidelines to SSC CDM methodologies”. The total number of modules of different capacity installed at the plant site is 61,392 (as mentioned in above table) and the total installed capacity of the modules comes out to be 14.9916 MWp (as mentioned in above table). Since the project activity has not been commissioned, the validation team reviewed the Consent to Establish issued by Gujarat Pollution control Board dated 03/05/2012 (Ref P/9/), Power Purchase Agreement between Dreisatz MySolar24 (P) Ltd and Gujarat Urja Vikas Nigam Limited (GUVNL), dated 25/10/2010 and based on the calculation for the capacity of the plant (as mentioned in above table), the validation team confirms that the capacity of the proposed CDM project activity is 15 MW and will remain within the small-scale limit of Type I projects for entire crediting period.

The proposed project activity is of capacity 15 MW, to ascertain that the project will remain under limits of small scale project activity and the equipments to be installed at the project site are new, the validation team raised CL 1. In response, project participant submitted the Detail project report (DPR) prepared by third party i.e. Arbutus Consultants Pvt. Ltd Ref /17/ as a evidence for project capacity and copy of purchase Order Dated 27/06/2012 (Ref /9/) to confirm that the project equipments are new. The project participant also changed the rated capacity of the solar panels in accordance with the purchase order issued to the module manufacturer i.e. Trina Solar Energy Development (PTE) Ltd. The validation team has reviewed the Consent to Establish issued by Gujarat Pollution Control Board dated 03/05/2012 /Ref/ and purchase order issued to Trina Solar Energy Development (PTE) Ltd dated 27/06/2012 /Ref/ to confirm the capacity of the project activity and newness of the equipments to be installed, hence the validation team closes the CL 1.

The Project will result in annual emission reductions of 23,699 tCO₂e during the seven years of its first renewable crediting period.



The validation team confirms that the estimated PLF of 18.929 % is sourced from independent third party energy generation assessment done by “Arbutus Consultants Private Limited”, dated 24/04/2012 (Ref /17/) which is complying with the Para. 3 of “Guidelines for the Reporting and Validation of Plant Load Factors” version 01. CL 6 was raised as the maximum efficiency of module indicated in manufacturer specification of the solar module is 15% and also it was not clear how the PLF was considered. In response, the project participant has explained that the PLF of 18.929% was earlier calculated based on the solar panels from manufacturer i.e. REC Solar AS. However at final stage the purchase order was raised to Trina Solar, hence the plant load factor (PLF of 20.524%) had been revised based on the actual solar panels to be installed and the PLF has been sourced from the “Third party energy generation assessment report” prepared by Arbutus Consultant Pvt. Ltd., dated 13/07/2012 (Ref /16/) for the new solar panels manufacturer i.e Trina Solar and the same is in accordance with “Guidelines for the Reporting and Validation of Plant Load Factors” version 01. However the validation team could not conclude on why PLF was high during the second time of assessment for the same site even though the capacity of solar panels were similar between the two suppliers, hence as a conservative approach PLF of 18.929% was considered, hence CL 6 was closed.

The validation did not reveal any information indicating that the Project can be seen as a diversion of official development assistance (ODA) funding towards the host country.

The processes undertaken by the validation team to validate the accuracy and completeness of the project description include conducting a physical site inspection, reviewing available documents.

Bureau Veritas Certification hereby confirms that the project description in the final PDD is accurate and complete in all respects.

3.8. Baseline and Monitoring Methodology

3.8.1. Applicability of the selected Methodology (77)

The Project uses the approved baseline and monitoring methodology AMS I.D Version 17 – “Grid Connected renewable electricity Generation” (Ref /18/).

The applicability of the selected methodology is justified and assessed as follows:

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

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

Steps taken for assessment – The proposed CDM project activity is a solar PV power project and the same was verified through physical verification during site visit on 27/08/2012. The proposed CDM project activity displaces grid electricity from NEWNE Grid, which is a national grid of host country. The grid connectivity was verified through contractual agreement for sale of



electricity with the GUVNL, dated 25/10/2010 having reviewed the Power Purchase Agreement (PPA) signed with Gujarat Urja Vikas Nigam Limited (Ref P/1/). This applicability condition is satisfied by the proposed CDM project activity.

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	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)			√
3	Project supplies electricity to an identified consumer facility via national/regional grid (through a contractual arrangement such as wheeling)		√	
4	Project supplies electricity to a mini grid system where in the baseline all generators use exclusively fuel oil and/or diesel fuel			√
5	Project supplies electricity to household users (included in the project boundary) located in off grid areas	√		

Steps taken for assessment – The grid connectivity was verified through contractual agreement for sale of electricity, having reviewed the Power Purchase Agreement signed with Gujarat Urja Vikas Nigam Limited, dated 25/10/2010 (Ref P/1/).

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 proposed CDM project activity is a Greenfield plant and involves new installations and operation of new solar PV modules. The same was verified by interview with Local stakeholders on 27/08/2012. The validation team also confirmed the newness of the solar PV modules by reviewing the purchase order issued to Trina Solar Energy Development (PTE) Ltd dated 27/06/2012 by the project participant (Ref P/9/). Hence, the validation team confirms that the proposed solar project activity is a grid connected green field solar power plant with installation of new solar PV modules in the project activity and there was no renewable energy power plant at the site prior to the implementation of the project activity. This criterion (applicability condition) is satisfied by the proposed CDM project activity.

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 proposed CDM project activity is a green field solar PV power project and hence this condition is not applicable in the project context. The solar PV project implementation has been confirmed by reviewing the Consent to Establish issued by Gujarat Pollution Control Board, dated 03/05/2012, which clearly states the installation of the Solar PV power project of capacity 15 MW in Village: Fatepur, District: Surendranagar, State: Gujarat. Hence, this condition is not relevant to the proposed CDM project activity.

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 – As described and confirmed in above applicability conditions, the proposed CDM 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 15 MW and the same has been verified by reviewing the Consent to Establish issued by Gujarat Pollution Control Board, dated 03/05/2012. The validation team has also reviewed the Detail Project Report (DPR) (Ref P/2/), Power Purchase Agreement (Ref P/1/) and Purchase Order (Ref P/9/), these documents also refer to the capacity of the proposed CDM project activity as 15 MW. Thus, the proposed CDM project activity has a rated capacity of 15 MW which is equal to the limiting capacity of 15 MW for small scale CDM project activity. This criterion (applicability condition) is satisfied by the proposed CDM project activity.

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

Steps taken for assessment – As described and confirmed in above applicability conditions, the proposed CDM project activity is a solar PV power project and hence involves only electricity generation utilizing solar (renewable) energy. There is not any possibility of co-generation in the proposed CDM 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 proposed CDM project activity is installation of a new grid connected solar PV project activity of capacity 15 MW and the same has been cross-checked



with the Consent to Establish issued by Gujarat Pollution Control Board, dated 03/05/2012 and purchase order issued to Trina Solar Energy Development (PTE) Ltd dated 27/06/2012 by the project participant (Ref P/9/). Based on the Consent to Establish, Purchase Order, the validation team confirms that the proposed CDM project activity is installation of Solar PV project plant at a site where there was no power generation existing prior to the implementation of the proposed CDM project activity. No existence of the power plant prior to the proposed CDM project activity has been cross verified by interviewing the local stakeholders during the on-site visit. Thus, this condition is not relevant to the proposed CDM project activity.

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 proposed CDM project activity 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.

Bureau Veritas Certification hereby confirms that the selected baseline and monitoring methodology, tool and other methodology component is previously approved by the CDM Executive Board, and is applicable to the Project, which, complies with all the applicability conditions therein.

3.8.2. Project Boundary (86-87)

The proposed project activity was in construction phase, hence the validation team has validated the project boundary by assessing the relevant documents such as Power Purchase Agreement for sale of electricity with the GUVNL, dated 25/10/2010 (Ref /1/) and Consent to Establish issued by Gujarat Pollution Control Board, dated 03/05/2012 (Ref /8/).

The spatial extent of the project boundary is clearly defined in line with AMS I D Version 17 as “The spatial extent of the project boundary includes the project power plant and all power plants physically connected to”. The validation team assessed the spatial extent of the project boundary through the description provided in the webhosted PDD and the Grid structure in India as known from the official data available from the Central Electricity Authority (CEA) Ref B/20/. The proposed CDM project boundary therefore includes the project power plant i.e. Solar PV power plant including panels, invertors, transformers, substation within the plant, all power plants connected physically to the NEWNE grid.

The greenhouse gases and emission sources included in the project boundary are carbon Dioxide (CO₂) and other fossil fuel based power plants physically connected to the NEWNE Grid.

Bureau Veritas Certification hereby confirms that the identified boundary and the selected sources and gases are justified for the project activity. The validation team did not identify any emission sources that will be affected by the implementation of the proposed project activity and which are expected to contribute more than 1% of the overall expected average annual emissions reductions, and are not addressed by the selected approved methodology.

3.8.3. Baseline Identification (94-95)

The procedure contained in the methodology to identify the most reasonable baseline scenario has been correctly applied.

The methodology AMS I D version 17 prescribes the baseline for the proposed CDM project activity. The proposed CDM project activity involves installation of a new grid-connected solar (renewable) energy based power plant/unit. Hence, the baseline scenario is the electricity delivered to the grid by the project activity that 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 accordance with the paragraph 10 of AMS I D version 17.

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

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)

In accordance with “Tool to calculate emission factor of an electricity system”, version 03.0.0. The CO₂ Emission Factor for the grid can be calculated in a transparent and conservative manner using either of the following options:

- 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.

The project participant has chosen Option (a) for the determination of grid emission factor and applied weighted average factors for the OM and BM as 75% & 25% respectively, as specified in the “Tool to calculate grid emission factor for an electricity system”. Accordingly, the combined margin emission factor value for NEWNE grid is calculated as 0.9528 t CO₂/MWh.

Validation team agrees to this emission factor since it is based on the official background data published by CEA (Central Electricity Authority) version 07, which is an official central government agency and publicly available database on operating and build margin emission factors to calculate combined margin emission factor. The version 07 of the CEA database used is as available on the date of webhosting of the PDD for global stakeholder comments (viz. start of validation). This data is published by Central Electricity Authority (CEA) who is the only sole authority for the publication of such data in India. The validation team further notes that the emission factors are not provided by DNA but by a competent authority i.e. (CEA).



Bureau Veritas Certification 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 plausible baseline scenario and the identified baseline scenario reasonably represents what would occur in the absence of the proposed project activity.

3.8.4. Algorithms and/or Formulae used to determine Emission Reductions (99-100)

The steps taken and the equations and parameters applied in the PDD to calculate project emissions, baseline emissions, leakage and emission reductions comply with the requirements of the selected methodology including applicable tool(s).

The project participant has used the algorithms and formulae in accordance with the applied baseline methodology viz. AMS I D, Version 17 and "Tool to calculate emission factor for an electricity system", Version 03.0.0. The detailed algorithms and/or formulae used in the calculations of baseline emissions and emission reductions are correctly explained in section B.6.1 of the PDD. The validation team confirms that the formulae have been applied correctly in accordance with the applied methodology AMS I D, Version 17.

Baseline emissions

As per the requirement of applied methodology AMS I D, Version 17, the project participant has calculated the baseline emissions by following Para 11 of methodology AMS I D i.e. electricity supplied by the proposed CDM 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 being submitted along with the request for registration.

Project Emissions

The project activity involves electricity generation of electricity by "renewable source" and hence in accordance with Para 20 of the methodology AMS-I.D, Version 17, the project emissions are considered as zero. The electricity exported by the project activity has been accounted 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 supplied 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 applied baseline and monitoring methodology AMS I D, version 17, the proposed CDM project activity does not lead to any leakage emissions since there is no transfer of equipment to or from the project activity boundary. Hence the leakage from project activity is considered to be zero.

As per the requirement of applied methodology AMS I D, Version 17, the project participant has calculated the emission reductions in accordance with Para 23 of the applied 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 the project participant in a emission reduction spreadsheet (Ref P/14/). The assumptions in this spreadsheet were validated as follows –

Baseline Emissions		
Parameter, Value	Source of information	Validation justification
Project Capacity (in MW) = 15 MW	Detail Project Report prepared by Arbutus Consultants Pvt. Ltd dated Feb 2012 (Ref P/2/)	The project capacity is taken as 15 MW from the Detail Project Report prepared by Arbutus Consultants Pvt. Ltd dated Feb 2012 (Ref P/2/). Cross-check- Project capacity has been cross-verified by Consent to Establish issued by Gujarat Pollution Control Board, dated 03/05/2012 and purchase order issued to Trina Solar Energy Development (PTE) Ltd dated 27/06/2012 by the project participant The validation team found the capacity of the proposed CDM project activity to be to be correct and consistent.
PLF (in %) for the project activity (15 MW) = 18.929%	Simulation study on annual generation done by third party engineering company i.e. Arbutus Consultant Pvt. Ltd dated 24/04/2012 (Ref	The PLF value was validated from Simulation study on annual generation done by third party engineering company i.e. Arbutus Consultant Pvt. Ltd dated 24/04/2012 (Ref /17/). The validation team agrees that this assumption is reasonable



	/17/)	as a value selected for emission reduction calculations. PLF selected is in accordance with Para 3 (a) of the Guidelines for the reporting and validation of PLF's (Ref B/16/), EB 48, Annex 11 which stipulates that Plant load factors shall be defined ex-ante based on "The plant load factor determined by a third party contracted by the project participants (e.g An engineering company)". Since the PLF is taken from third party engineering company, the same has been considered to be correct and well justified and hence is accepted by the validation team. Cross check – The validation team cross verified the PLF value from the Gujarat Electricity Regulatory Commission's (GERC) tariff order dated 29/01/2010 (Ref P/26/). The tariff order specifies the value of PLF for solar PV projects as 20% for SPV. The validation team concluded that the PLF value of 18.929% for the project activity used for the purpose of computing electricity generation, however the emission reduction will be claimed as per the actual generation by the project activity. The validation team would like to reiterate that PLF is discussed on the grounds of emission reduction calculations only as the investment analysis for the demonstration of additionality is not applicable to the proposed CDM project activity due to it's eligibility under positive list of technologies as per "Guidelines on the demonstration of additionality of small-scale project activities" Version 09 (Ref /24/).
Grid EF(tCO ₂ /MWh) = 0.9528	CEA database ver. 7 (Ref /20/)	CEA database is an official source of such data available in the host country. This database is also available publicly and hence well justified and accepted by the



		validation team. .
Project Emissions		
Not applicable since there are no emissions attributable to the proposed CDM project activity within the project boundary		
Leakage		
Not applicable since there is no transfer of equipment to and from project boundary and hence in accordance with para 22 of the applied methodology, the leakage emissions are considered to be zero.		

The estimated annual average of approximately 23,699 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 Emission reduction spreadsheet (Ref P/14/) for calculations of emission reductions.

Bureau Veritas Certification 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 project activity;
- (d) The baseline methodology and corresponding tool(s) have been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions;
- (e) All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PDD.

3.9. Additionality (104)

As required by the selected methodology, the additionality of the Project has been demonstrated by applying "Guidelines on the demonstration of additionality of small-scale project activities" Version 09. The proposed CDM project is a small scale project activity as per the classification of type I small scale projects provided in General Guidelines to SSC CDM methodologies provided by CDM-EB. Therefore, in accordance with para 28 of the simplified modalities and procedures for small-scale CDM project activities, the additionality of the project

activity has been demonstrated using “Guidelines on the demonstration of additionality of small-scale project activities” Version 09 and guidance given vide Annex 5 of EB 62. As all requirements specified vide para 28 of the simplified modalities and procedures are complied with by the project activity, this approach has been assessed to be appropriate and well justified for the additionality assessment for this project activity.

The steps taken and sources of information used to cross-check the information contained in the PDD on this matter are described in the subsequent sections from 3.9.1 to 3.9.5 of this report below.

3.9.1. Prior consideration of the Clean Development Mechanism (112)

The timeline of the Project has been validated as in Table 3 below:

Table 3 Timeline of the Project

Date	Events	Reference
25/10/2010	Power Purchase Agreement	Power Purchase Agreement between project participant and Gujarat Urja Vikas Nigam Limited (GUVNL) (Ref/1/)
Feb/2012	Detail Project report	Detail Project report prepared by Arbutus Consultants Private Limited (Ref /2/)
24/02/2012	Purchase Order	Purchase Order raised by project participant to Voltamp Transformers Limited (Ref /3/)
07/03/2012	Prior Consideration Form	Prior Consideration Form , dated 07/03/2012 (Ref /4/)
20/03/2012	Intimation for prior consideration of CDM sent to UNFCCC	E-mail of intimation sent to UNFCCC (Ref /5/)
20/03/2012	Intimation for prior consideration of CDM sent to DNA	E-mail of intimation sent to DNA (Ref /6/)
12/04/2012	Invitation sent to Local stakeholders	Invitation Letter (Ref /7/)
26/04/2012	Local Stakeholder Consultation conducted by project participant	Minutes of meeting for Local stakeholder consultation (Ref /7/)



03/05/2012	Consent to establish the project activity issued by Gujarat Pollution Control Board	Consent to establish issued by Gujarat Pollution Control Board (Ref /8/)
27/06/2012	Purchase Order for Solar Modules	Purchase Order for Solar Modules raised by the project participant to Trina Solar Energy Development PTE Ltd. (Ref /9/)

From the table above, the validation team is able to verify that the project activity start date determined as 24/02/2012 in the PDD is appropriate and is the earliest of the dates at which the real action of the Project began. This is in accordance with the latest CDM glossary.

It is a project activity with a start date after 2 August 2008, for which a PDD had not been published for global stakeholder consultation before the project activity start date. By referring to the list of prior consideration notifications from the UNFCCC website and communication between the project proponent, the secretariat (on 20/03/2012) and the host Party DNA (on 20/03/2012) regarding the commencement of a new project activity, the validation team confirms that the notifications have been provided by the project participants within 180 days of the project activity start date.

CL 4 was raised, as the project participant had not provided the e-mail communication with DNA. In response, the project participant has provided the e-mail communication with DNA. Hence, validation team confirms that the project participant has sent the intimation to DNA within six months from the start date of the project activity and closed the CL 4

Bureau Veritas Certification hereby confirms that the proposed project activity complies with the requirements related to the prior consideration of the CDM.

3.9.2. Identification of Alternatives (116)

The approved baseline and monitoring methodology AMS I D, version 17 prescribes the baseline scenario, hence as per para 116 of project standard, version 03.0 (Ref /25/), no further analysis on identification of alternatives is required.

3.9.3. Investment Analysis (123)

Analysis method

The project activity falls under the small scale category, the project participant has applied "Guidelines on the demonstration of additionality of small-scale project activities" Version 09 (Ref /24/) for demonstrating additionality. The paragraph 2 of the guidelines has defined 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);
- (d) Building-integrated wind turbines or household rooftop wind turbines of a size up to 100 kW.

Since the proposed CDM project activity is a 15 MW grid-connected solar photovoltaic power project, hence it falls under type 2 (a) above and by default does not require documentation of barriers for demonstration of additionality.

The validation team has confirmed that proposed CDM project activity to be complying under option (a) above as per following:

- Purchase Order raised by the project participant to Trina Solar Energy Development PTE Ltd. (Ref P/9/)
- Consent to establish issued by Gujarat Pollution Control Board (Ref P/8/)
- Detail Project report prepared by Arbutus Consultants Private Limited (Ref P/2/)
- Power Purchase Agreement between project participant and Gujarat Urja Vikas Nigam Limited (GUVNL) (Ref P/1/)

Benchmark

The project activity falls under small scale project "Guidelines on the demonstration of additionality of small-scale project activities" Version 09 (Ref /24/) for demonstration of additionality. The para 2 of the 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).
- d) Building-integrated wind turbines or household rooftop wind turbines of a size up to 100 kW

Since the proposed CDM project activity is a 15 MW grid-connected solar PV power project, hence it falls under type 2 (a) above and hence benchmark calculation is not required.

3.9.4.Barrier Analysis (127)

The proposed CDM project activity is a small scale project activity and hence, the Barrier Analysis is not applicable. The proposed CDM project activity is also exempted from the demonstration of additionality as described in above 3.9.3 section, prior to this section.

3.9.5.Common Practice Analysis (130)

The proposed CDM project activity is a small scale project activity and hence, the Common Practice Analysis is not applicable. The proposed CDM project activity is also exempted from the demonstration of additionality as described in above 3.9.3 section, prior to this section.

3.10. Monitoring Plan (133)

The Project uses the approved monitoring methodology AMS I D Version 17.

Applicability of this methodology is justified in PDD as the project activity satisfies all criteria mentioned in the applied approved methodology AMS I D, version 17. Referring to the discussions on the applicability of the methodology in section 3.8.1 above, the validation team considers that the selected monitoring methodology is applicable to the Project.

Data and Parameters Monitored

In accordance with Paragraph 24 of the methodology AMS I D, version 17, following is the list of the parameters required to be monitored.

The list of parameters identified in the PDD and the source of 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 _{2e} /MWh	CEA CO ₂ baseline database version 07. This is an official source of data and hence acceptable to the validation team
2.	Build margin emission factor ($EF_{grid,BM,y}$)	0.8588 tCO _{2e} /MWh	CEA CO ₂ baseline database version 07. This is an official source of data and hence acceptable to the validation team
3.	CO ₂ emission factor of NEWNE grid ($EF_{CO_2,grid,y}$)	0.9528 tCO _{2e} /MWh	CEA CO ₂ baseline database version 07. This is an official source of data and hence acceptable to the validation team

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**

Parameter included in the monitoring plan of the PDD	Corresponding parameter in the monitoring plan of the methodology
Quantity of net electricity supplied by the project plant/unit to the grid in year y ($EG_{BL,y}$)	Project Participants has included the parameter “Quantity of net electricity supplied by the project plant/unit to the grid in year y” which is identified as $EG_{BL,y}$. This parameter will be calculated based on the difference between the measured quantity of electricity exported and electricity imported ($EG_{BL,y} = EG_{Export,y} - EG_{Import,y}$) at the grid interconnection point, which is located in the project premises. The meter reading will taken by the GETCO (Gujarat Electricity Transmission Company Limited) in presence of representative of project participant at every week and consolidated monthly generation data will be uploaded on State Load Dispatch Centre (SLDC) website. Validation team confirms that there is no common pooling for the proposed CDM project activity. The metering at the project premises is the dedicated metering for the project activity. Thus, net electricity exported will be calculated as $EG_{BL,y} = EG_{Export,y} - EG_{Import,y}$ The above described monitoring of the parameter $EG_{BL,y}$ is in accordance with SR No. 5 under table 1 of para 24 of applied baseline and monitoring methodology AMS ID version 17

The project participant has mentioned in section B.7 of the PDD that the main meters will be installed at the plant and check meter will be installed at the sub-station to measure the electricity Export and Import by the project activity. Both the main and check meters are in control of state Utility i.e. GETCO. The meters installed for the project activity are dedicated meters, hence no common pooling is done for the project activity. The net electricity supplied to the Grid is calculated based on net electricity exported and net electricity imported ($EG_{BL,y} = EG_{Export,y} - EG_{Import,y}$) at project premises.

The validation team considers that the description of the monitoring plan contains all necessary parameters, that they are described and that the means of monitoring described in the plan complies with the requirements of the methodology including applicable tool(s).



Implementation of the Monitoring Plan

Validation team visited the site on 27/08/2012, as the proposed project activity was in construction phase, the validation team interviewed the relevant personnel (list of persons interviewed detailed below in the report) in-order to understand the project design as reported by the PP, there were no common pooling of the power for the project activity and instead there is a dedicated metering as mentioned above that the main meter is installed at the plant site and check meter is installed at the Grid-Substation.

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 net electricity supplied by the project plant/unit to the grid in year y ($EG_{BL,y}$)	Calibration of all the meters shall be done once in a period of three years in accordance with the Power Purchase Agreement and the Indicative simplified baseline and monitoring methodologies for selected small scale CDM project activity categories*. Calibration will be done by an authorized agency or reputed laboratory. The meters will be bi-directional with an accuracy class of 0.2 s. In case the main meter is found faulty or not functioning properly, then meter will be repaired, recalibrated or replaced as soon as possible and the reading for the corresponding period shall be taken from the check meter. In case both the main and check meter are found to be outside the acceptable limits of accuracy or faulty or not functioning properly, both the meters shall be calibrated immediately and the error percentage found in the main meter during its calibration shall be applied to its metered energy data for the entire period since its last calibration to obtain the corrected value of net electricity exported to the grid.

The monitoring frequency for $EG_{BL,y}$ matches with that of the applied methodology, viz. continuous measurement and monthly recording. The cross checking is provided with the record of sold electricity (invoices) which indicates the invoice raised to the State Utility for net electricity delivered by the Project Activity to the grid.

The validation team considers that 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 achieved by/resulting from the proposed project activity can be reported ex post and verified.

* http://cdm.unfccc.int/EB/023/eb23_repan33.pdf



CL 7 and CL 8 were raised as the project participant had not provided the details of location of meters, emergency preparedness, data uncertainty and procedure to be adopted for determining the net electricity supplied to the grid, in case the date of registration does not match with the billing cycle. In response, the project participant explained the emergency Preparedness and data uncertainty and QA/QC procedure in section B.7.3 of the PDD and also demonstrated the procedure adopted for determining the net electricity supplied to the grid, in case the date of registration does not match with the billing cycle. Hence validation team closed the CL 7 and CL 8.

Bureau Veritas Certification hereby confirms that the monitoring plan complies with the requirements of the applied approved methodology including applicable tool(s), the monitoring arrangements described in the monitoring plan are feasible within the project design and the project participants are able to implement the described monitoring plan

3.11. Environmental Impacts (137)

As per the Schedule of the EIA notification (Ref /21/), given by the Ministry of Environment and Forests (Government of India), EIA is not a regulatory requirement in India for solar energy projects. Thus the project activity doesn't require EIA. The project activity does not involve any negative environmental impacts, as the solar power plant is installed for generation of power using solar energy which is a clean source of energy.

Project participant has obtained HCA approval (Ref /15/) from DNA of India and it is confirmed by the Authority that the project contributes to sustainable development in India. The project activity is in compliance with all current applicable legislations.

3.12. Local Stakeholder Consultation (140)

The project participants have completed a local stakeholder consultation process and that due steps were taken to engage stakeholders and solicit comments for the proposed project activity.

The local stakeholder consultation meeting was conducted by Project Participant to receive the comments/suggestions of local stakeholder's regarding the project activity on 26/04/2012. The stakeholders were invited to attend the meeting through personal invitations sent on 12/04/2012 (Ref P/7/), thus giving sufficient notice time to the stakeholders to attend the meeting.

Acknowledged copies of invitation letters were provided to the validation team. During the site visit by the validation team, interview was conducted with local stakeholders. The local villagers appreciated the project activity as the project has generated the opportunity of employment to local residents of the nearby villages. 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.

Bureau Veritas Certification hereby confirms that comments that are relevant for the proposed project activity have been invited from local stakeholders, the summary of the comments received as provided in the PDD is complete, the project participants have taken due account of all comments received and have described this process in the PDD.



4. COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

The PDD using methodology “Grid Connected Renewable Electricity Generation”, AMS I D, version 17 was webhosted on the UNFCCC for global stakeholder comments as per CDM requirements. The project was webhosted from 07/07/2012 to 05/08/2012.

Comments were received from 4 persons. The project participant provided response to these comments. The 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 participants and the explanation of how due account of these 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 “Solar PV Power Project by DMPL in Fatepur, Gujarat”, which is located in Village: Fatepur, Taluka: Dasada, District: Surendranagar, State: Gujarat, Country: India. The validation was performed on the basis of UNFCCC criteria for the CDM, and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

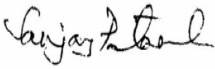
The validation consisted of the following three phases: i) desk review of the project design document and additional background documents; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final validation report and opinion.

The project correctly applies the approved baseline and monitoring methodology AMS ID Version 17 and uses the latest guidelines for demonstration of the additionality.

By installing 15 MW solar power plant, the project is likely to result in reductions of GHG emissions that are real, measurable and give long-term benefits to the mitigation of climate change. It is demonstrated that the project 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 annual emission reductions of 23,699 tCO₂e during the seven years of its first renewable crediting period.

The review of the project design documentation 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 meets all relevant UNFCCC requirements for the CDM and the relevant host country criteria. Bureau Veritas Certification thus requests registration of the project as a CDM project activity.

	
Mr. Sanjay Patankar	Mr. V. Senthil Kumar
Internal Technical Reviewer	Team Leader
20/12/2012	20/12/2012



6. REFERENCES

Category 1 Documents:

Documents provided by project participants that relate directly to the GHG components of the project.

/1/	Power Purchase Agreement between project participant and Gujarat Urja Vikas Nigam Limited (GUVNL)
/2/	Detail Project report prepared by Arbutus Consultants Private Limited
/3/	Purchase Order raised by project participant to Voltamp Transformers Limited
/4/	Prior Consideration Form
/5/	Intimation for prior consideration of CDM sent to UNFCCC
/6/	Intimation for prior consideration of CDM sent to DNA
/7/	Invitation sent to Local stakeholders
/8/	Consent to establish issued by Gujarat Pollution Control Board
/9/	Purchase Order raised by the project participant to Trina Solar Energy Development PTE Ltd.
/10/	Technical specification of the solar panel manufacturer
/11/	Certificate Of Incorporation for project participant
/12/	Webhosted PDD, version 01, dated 17/05/2012
/13/	Revised PDD, version 02, dated 23/11/2012
/14/	Emission reduction calculation sheet
/15/	Host Country Approval Letter Number Ref-No 4/16/2012-CCC dated 06/11/2012 (in the name of Dreisatz MySolar24 (P) Ltd.)
/16/	Third party Simulation study for estimated generation by the project activity for Trina Solar panels
/17/	Third party Simulation study for estimated generation by the project activity for REC Solar AS

Category 2 Documents:

Background documents related to the design and/or methodologies employed in the design or other reference documents used for cross-check.

/18/	AMS-I.D.– Grid connected renewable electricity generation(version 17)
/19/	General Guidelines to SSC CDM methodologies(version 17)
/20/	Central Electricity Authority (CEA) database version 7.0
/21/	EIA Notification dated 1/12/2009
/22/	Tool to calculate the emission factor for an electricity system(version 03.0.0)
/23/	Guidelines for the reporting and validation of Plant load factors(version 01)
/24/	"Guidelines on the demonstration of additionality of small-scale project activities" Version 09
/25/	Clean Development Mechanism Project Standard, version 03.0, EB 70



/26/	Gujarat Electricity Regulatory Commission (GERC) tariff order dated 29/01/2010
------	--

Persons interviewed:

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

	Dreisatz MySolar24 (P) Ltd	
/1/	Mr. K.G. Muruganand	DGM - Dreisatz MySolar24 (P) Ltd
/2/	Mr. Ashok Pandey	Sr. Manager - Dreisatz MySolar24 (P) Ltd
/3/	Mr. Mayur Dave	Manager - Dreisatz MySolar24 (P) Ltd
/4/	Mr. Shobhit	Asst. Manager - Dreisatz MySolar24 (P) Ltd
	Local Stakeholder	
/5/	Mr. Sona Bhai	Village: Fatepur, Sarpanch
/6/	Mr. Lakshman Bhai	Village: Fatepur, Farmer
/7/	Mr. Soma Bhai	Village: Fatepur, Farmer



7. CURRICULA VITAE OF THE DOE'S VALIDATION TEAM MEMBERS

Mr. V. Senthil Kumar	Bureau Veritas Certification, India	Team Leader, Climate Change, Lead Verifier, He is a Environmental Engineer with over 7 years of experience in the field of Consultancy related to Training and Implementation of Management Systems (ISO : 9000, 14000 & 18000) for various organizations. For the last 5 years, he is involved in different type of Clean Development Mechanism Projects. He has also experience in offering project management services to various renewable energy projects. Has undergone training related to Clean Development Mechanism and is currently involved in validation and verification of CDM project activities.
Mr. Rakesh Tripathi	Bureau Veritas Certification, India	Team Member, Climate Change, Verifier. Mr. Rakesh Tripathi is a postgraduate in Power management with over 2 years of experience in the field of Clean Development Mechanism. Mr. Rakesh Tripathi joined Bureau Veritas as a Verifier -Climate Change (Trainee). Prior to joining Bureau Veritas, he was working with a consultant for due diligence and development of projects under CDM/VCS mechanism.
Mr. Sanjay Patankar	Bureau Veritas Certification, India	Technical Reviewer, Climate Change, Lead Verifier. He has over 20 years of experience in engineering manufacturing industry covering various functions like enterprise management, product design, engineering, tool & die design, improvements in the production shop, quality assurance & control and systems planning and implementation, including ISO 9001 based quality management systems. Working for the last 2 years in Bureau Veritas Certification (India) Private Ltd. as Lead Auditor for ISO 9001, 14001 and OHSAS 18001 standards/specifications. Has undergone training related to Clean Development Mechanism and is currently involved



 VALIDATION REPORT

		in validation and verification of CDM project activities.
Mr. H. B. Muralidhar	Bureau Veritas Certification, India	Specialist Supporting Technical Reviewer, Climate Change, Lead Verifier. 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: CDM PROJECT VALIDATION PROTOCOL

Table 1 Validation requirements based on VVS version 02.0 (EB 65 Annex 4), PS version 01.0 (EB 65 Annex 5), PCP version 02.0 (EB 66 Annex 64), and Guidelines for completing the SSC DD form version 01.0 (EB66 Annex 9)

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
Part I Cover Page					
(a) Is the title of the project activity provided?	PDD		The title of the project activity is provided as "Solar PV Power Project by DMPL in Fatepur, Gujarat."	OK	OK
(b) Is the version number of the PDD indicated?	PDD		The version number of the PDD is mentioned as 01	OK	OK
(c) Is the completion date of the PDD provided in DD/MM/YYYY format?	PDD		The completion date is provided in DD/MM/YY format as 17/05/2012	OK	OK
(d) Are project participants indicated?	PDD		The project participant is mentioned as "Dreisatz MySolar24 (P) Ltd."	OK	OK
(e) Is the host party(ies) indicated?	PDD		The host party is indicated as "India"	OK	OK
(f) Is the sectoral scope and selected methodology(ies) indicated?	PDD		The sectoral scope and selected methodology is mentioned as "Sectoral scope : 1 (Energy Industries)" and "Methodology: AMS ID version 17" respectively	OK	OK
(g) Is the estimated amount of annual average GHG emission reductions indicated?	PDD		The estimated annual average GHG emission reductions are indicated as 23,699 tCO ₂ /annum	OK	OK
Part II PDD					

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
A. Description of project activity					
A.1 Purpose and general description of project activity					
A.1.1 Is a brief description of the project activity provided, including a summary of the scope of activities/ measures that are to be implemented within the project activity?	PDD PS	31(b)	A brief description of the project activity including purpose of the project activity is mentioned in section A.1 of the PDD	OK	OK
A.1.2 Is the scenario existing prior to the start of project and baseline scenario indicated?	PDD		The project participant mentioned the scenario existing prior to the start of project (i.e. no electricity generation at the project site prior to the start of project) and baseline scenario in section A.1 of the PDD. The same has been cross checked during physical site visit on 27/08/2012	OK	OK
A.1.3 Does it explain how the project activity will reduce GHG emissions or increase GHG removals?	PS	31(c)	It is explained that how the project activity will reduce GHG emissions of 23,699 tonnes of CO ₂ per annum	OK	OK
A.1.4 Is the estimated of annual average and total GHG emission reductions for the chosen crediting period provided?	PDD		Total GHG emission reductions for the entire chosen crediting period is not provided.	CAR 1	OK
A.1.5 Is a brief description of how the project activity contributes to sustainable development provided?	PDD		The contribution to sustainable development is provided in the PDD in section A.1 of the PDD on the basis of the indicators prescribed by the Ministry of Environment and Forest of Host country	OK	OK
A.1.6 In order to determine whether the description of the	VVS	65	The validation team has done the physical	OK	OK

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
proposed project activity in the PDD is accurate, complete, and provides an understanding of the proposed CDM project activity, does the DOE conducted a physical site visit to assess the Project? If not, please justify.			site visit on 27/08/2012. The project description provided in the PDD is accurate and complete as per the observation made during the site visit.		
A.1.7 For all other proposed CDM project activities not referred to in VVS paragraphs 65-66, does the DOE undertaken the validation of project description by reviewing available designs and feasibility studies and should conduct comparison analysis with equivalent projects, as appropriate.	VVS	67	The team has done the validation of the project description during physical site visit by one member validation on 27/08/2012 and Document review on the site.	OK	OK
A.1.8 If the proposed CDM project activity involves the alteration of an existing installation or process, does the project description state the differences resulting from the project activity compared to the pre-project situation?	VVS	68	The proposed project activity do not involves alteration of an existing installation and the same has been cross checked during site visit and interview with the Local stakeholders.	OK	OK
A.2 Location of project activity					
A.2.1 Is the host party(ies) indicated?	PDD		Host Party Indicated as "India"	OK	OK
A.2.2 Is region/state/province etc. indicated?	PDD		State is Indicated as "Gujarat"	OK	OK
A.2.3 Is City/Town/Community etc. indicated?	PDD		Indicated as District: Surendranagar, Taluka: Dasada, Village: Fatepur	OK	OK
A.2.4 Are the details of physical location of the project activity, including information allowing the unique identification of this project activity and a map,	PDD		The physical location of the project activity, including latitude and Longitude details as Unique identification and map of the project	OK	OK

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
provided?			activity is provided in section A.2.4 of the PDD		
A.3 Technologies and measures (section A.3 of DD)					
A.3.1 Are there a list and the arrangement of the main manufacturing/ production technologies, systems and equipment involved?	PDD		The arrangement of the main manufacturing technologies, systems and Equipment involved has been explained in section A.3 of the PDD.	OK	OK
A.3.1.1 Is the information about the age and average lifetime of the equipment based on manufacturer's specifications and industry standards, and existing and forecast installed capacities, load factors and efficiencies included in the description?	PDD		The project participant has mentioned that the life time of the whole installation as 25 years in section A.3 of the PDD. Please provide the supporting document for the same. The size of project activity is 15 MW, PP to clarify how the size of project activity would remain under the small scale limits for the chosen crediting period and the equipments installed at the project site are new.	CL 1	OK
A.3.1.2 Are the monitoring equipments and their location in the systems included in the description?	PDD		The project participant has not provided information regarding Monitoring equipments and their location in section A.3 of the PDD.	CAR 2	OK
A.3.2 Are energy and mass flows and balances of the systems and equipment included in the project activity provided?	PDD		The proposed project activity is a small scale project of capacity 15MW. Hence Not applicable	OK	OK
A.3.3 Are the types and levels of services provided by the systems and equipment that are being modified and/or installed under the project activity and their	PDD		No systems and equipments are being modified and/or installed under the proposed project activity	OK	OK

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
relation, if any, to other manufacturing/ production equipment and systems outside the project boundary provided?			Hence, Not applicable		
A.3.4 Does the description clearly explain how the same types and levels of services provided by the project activity would have been provided in the baseline scenario?	PDD		a) The project participant has not mentioned how the same types and levels of services provided by the project activity would have been provided in the baseline scenario	CAR 3	OK
A.3.5 Is a list of facilities, systems and equipment in operation under the existing scenario prior to the implementation of the project activity provided?	PDD		The project activity is Greenfield project of capacity 15 MW. The same has been cross checked during physical site visit on 27/08/2012. Hence, Not applicable	OK	OK
A.3.6 Is a list of facilities, systems and equipment in the baseline scenario provided?	PDD		The project activity is Greenfield project of capacity 15 MW connected to NEWNE grid and as per the applied methodology AMS ID, version 17 baseline is NEWNE grid. Hence, Not applicable	OK	OK
A.3.7 If the proposed small-scale CDM project activity involves more than one component, do the project participants provide ex-ante calculations of baseline, project and leakage GHG emissions as well as GHG emission reductions for each year of the crediting period and for each component separately?	PS	90	The proposed small scale CDM project activity does not involve more than one component. Hence not Applicable	OK	OK
A.3.8 Is a full description of the technologies and measures of the baseline scenario provided?	PDD		The project activity is Greenfield project of capacity 15 MW connected to NEWNE grid and as per the applied methodology AMS ID,	OK	OK



CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			version 17 baseline is NEWNE grid.		
A.3.9 To determine the performance of equipment used in the proposed small-scale CDM project activity, does the project participants shall use: a) The appropriate value specified in the selected methodology; b) The national standard for the performance of the equipment type (project participants shall identify the standard used) if the value specified in subparagraph (a) is not available; c) An international standard for the performance of the equipment type, such as International Organization for Standardization (ISO) and International Electro technical Commission (IEC) standards (project participants shall identify the standard used) if the value specified in subparagraph (b) is not available; d) The manufacturer's specifications, provided that they are tested and certified by national or international certifiers, if the value specified in subparagraph (c) is not available; e) Performance data from test results conducted by an independent entity for equipment installed under the project activity if the value specified in subparagraph (d) is not available.	PS	91	b) The project participant has not mentioned about the following details in section A.3 of the PDD, Whether the equipments used in the project activity follows any International standards for the performance of the equipment	CAR 3	OK
A.4 Are following information of party(ies) and project	PDD				

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
participant(s) involved in the project activity provided in the tabular format? (section A.4 of PDD)					
A.4.1.1 List of project participants and parties	DD		The project participant is mentioned as "Dreisatz Mysolar 24 (P) Ltd." (Private Entity) in section A.4 of the PDD	OK	OK
A.4.1.2 Identification of Host Party	DD		The Host party is identified as "India" in section A.4 of the PDD	OK	OK
A.4.1.3 Indication whether the Party wishes to be considered as project participant	DD		It is indicated that the party do not wish to be considered as project participant	OK	OK
A.5 Public funding of project activity					
A.5.1 Is it indicated whether the project activity receives public funding from Annex I Parties?	DD		The project participant has mentioned that "No public funding is availed for the project activity from parties included in Annex I" in section A.5 of the PDD	OK	OK
A.5.2 In case where public funding from Annex I Parties is involved, are followings provided? (a) Information on Parties providing public funding (b) Attached in Appendix 2: the affirmation obtained from such Parties that such funding does not result in a diversion of official development assistance, is separate from, and is not counted towards the financial obligations of those Parties	PS	34	The project participant has mentioned that "No public funding is availed for the project activity from parties included in Annex I" in section A.5 of the PDD Hence, Not applicable	OK	OK
A.6 Debundling for project activity					
A.6.1 Does the project participant demonstrate that the project activity is not a debundled component of a	DD PS	87	The project participant has demonstrated that the project activity is not a debundled	OK	OK

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
large-scale project activity?			component of a large-scale project activity		
A.6.2 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?	PS EB54	88 Ann13	The proposed small scale project activity is not a debundled component of a large scale project activity. The project participant has no registered CDM project activity and has not requested registration of any other small scale project activity in the same project category and technology within 1 Km of the proposed project activity. The same has been cross checked through UNFCCC website and physical site visit conducted on 27/08/2012.	OK	OK
B. Application of selected approved baseline and monitoring methodology					
B.1 Reference of methodology (section B.1 of PDD)					
B.1.1 Is the selected methodology (ies) indicated with exact reference (number, title and version)?	DD		The selected methodology indicated as AMS ID, version 17, EB 61 and title as "Grid connected renewable electricity generation"	OK	OK
B.1.2 Are the baseline and monitoring methodologies selected by the project participants the valid versions of those approved by the Board?	VVS	70	The baseline and monitoring methodologies selected by the project participant are valid version of the methodology approved by the Executive Board	OK	OK
B.1.3 Are there any tools and other methodologies to which the selected methodology indicated?	DD		The following tools are referred in selected methodology AMS ID, version 17 and the same has been mentioned in the section B.1 of the PDD.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			1. Tool to calculate the emission factor for an electricity system, Version 03.0.0 2. Tool to calculate project or leakage CO2 emissions from fossil fuel combustion, Version 02		
B.1.4 Has specific guidance and/or clarifications provided by the Board with respect to the approved methodology and any applicable tools been applied?	VVS	71	No specific guidance and/or clarifications provided by the Board with respect to the approved methodology and any applicable tools to the project activity.	OK	OK
B.1.5 Is there any deviation or clarification requested for the approved methodology?	VVS	78-81	Not Applicable	OK	OK
B.2 Project activity eligibility					
B.2.1 Is the selected baseline and monitoring methodology applicable to the project activity and that the selected version valid at the time of submission of the proposed project activity for registration?	VVS	73-75	The PP has selected AMS ID, Version 17, which is applicable to the project activity and the same was a valid version at the time of submission of the proposed project activity for registration.	OK	OK
B.2.2 Does the PDD justify the choice of the selected methodology (ies) by showing that the project activity meets each applicability conditions of the selected methodology (ies)?	DD VVS	76	The PDD justify the choice of selected methodology by showing that the project activity meets each applicability condition of the selected methodology.	OK	OK
B.2.3 Does the PDD indicate, from among the following below, the project type of the proposed small-scale CDM project activity, and demonstrate that the project activity qualifies as Type I, II, and/or III during	DD PS	81	The proposed small-scale CDM project activity is a renewable energy project activity with a maximum output capacity of 15 MW. And also it is indicated that the capacity of	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
every year of the crediting period in accordance with applicable provisions for project activity eligibility in the Project standard: a) Type I: Renewable energy project activities with a maximum output capacity of 15 MW (or an appropriate equivalent); b) Type II: Energy efficiency improvement project activities that reduce energy consumption, on the supply and/or demand side, with a maximum output of 60 GWh per year (or an appropriate equivalent) in any year of the crediting period; or c) Type III: Other project activities not included in Type I or Type II that result in GHG emission reductions not exceeding 60 ktCO₂e per year in any year of the crediting period.			the project activity will not exceed 15 MW over the entire crediting period.		
B.2.4 Do the project participants ensure that the proposed small-scale CDM project activity remains, for every year during the crediting period, within the limits of the type of project activity defined in section B.2.3 above.	DD PS	83	The project participant has indicated in section B.2 of the PDD that the capacity of the project activity will not exceed 15 MW over the entire crediting period.	OK	OK
B.2.5 Do the project participants explain the documentation that has been used as a basis for justification and provide the references, or include the documentation in Appendix 3 of the PDD?	DD		The project participant has not provided any reference or documents in appendix 3 of the PDD, which has been used as a basis for justification.	CL 2	OK
B.3 Project boundary					
B.3.1 Is the project boundary of the project activity defined	DD		The project boundary of the project activity	OK	OK

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
based on the guidance of the selected methodology(ies)?			defined is based on the guidance of the selected methodology.		
B.3.2 Is a flow diagram of the project boundary presented, physically delineating the project activity?	DD		The flow diagram of the project boundary presented, physically delineates the project activity. The same has been cross checked during site visit on 27/08/2012	OK	OK
B.3.3 Does the flow diagram include the equipment, systems and flows of mass and energy described? In particular, is the emission sources and GHGs included in the project boundary and the data parameters to be monitored indicated in the diagram?	DD VVS	82	The flow diagram include the equipment, systems and metering locations of the project activity. The emission sources are also included in the project boundary.	OK	OK
B.4 Establishment and description of baseline scenario	DD				
B.4.1 Is an explanation how the baseline scenario is established in accordance with the selected baseline methodology provided?	DD		The baseline for the proposed project activity is established in accordance with definition <i>"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"</i> prescribed by the applied methodology.	OK	OK
B.4.2 When establishing the baseline scenario, and where "future anthropogenic emissions by sources are projected to rise above current levels due to the specific circumstances of the host Party", do the project participants follow the "Guidelines on the	PS	42	Not applicable to the proposed project activity	OK	OK

VALIDATION REPORT



CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
consideration of suppressed demand in CDM methodologies”?					
B.4.3 Does the PDD explain and justify the key assumptions and rationale. Provide and explain all data used to establish the baseline scenario (variables, parameters, data sources etc.) and provide all relevant documentation and/or references?	DD		The webhosted PDD justifies the key assumptions and rationale used to establish baseline in section B.4 of the PDD. However, project participant to justify the appropriateness of source for $EG_{BL,Y}$.	CL 3	OK
B.4.4 Provide a transparent description of the baseline scenario as established?	DD		The baseline for the proposed project activity is established in accordance with definition “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” prescribed by the applied methodology.	OK	OK
B.4.5 Are the documents and sources referred to in the PDD correctly quoted and interpreted and are they crosschecked with other verifiable and credible sources, such as local expert opinion, if available?	VVS	91	The documents and sources referred to in the PDD correctly quoted. However, refer B.4.3 (above)	-	-
B.4.6 Does the PDD provide a 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 project activity?	VVS	92	The baseline for the proposed project activity is established in accordance with definition “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	OK	OK

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			<i>and by the addition of new generation sources into the grid</i> ” prescribed by the methodology and the same is described in the PDD.		
B.4.7 Have all applicable CDM requirements been taken into account in the identification of the baseline scenario for the proposed project activity?	VVS	93	All applicable CDM requirements been taken into account in the identification of the baseline scenario for the proposed project activity	OK	OK
B.4.8 Has relevant national and/or sectoral policies and circumstances (type E+ or E-), such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector been taken into account?	VVS	93	The national and/or sectoral policies that are relevant to the selected baseline for the proposed project activity are described in section B.5 of the PDD	OK	OK
B.5 Demonstration of additionality					
B.5.1 Is the project activity demonstrated additional in accordance with one of options provided in the applicable provision for demonstration of additionality for small-scale project activities in the Project standard	DD		The project participant has demonstrated additional in accordance with the para 2, Annex 24, EB 63. As the project activity is a Grid connected solar project of capacity 15 MW, which comes under positive list of technology.	OK	OK
B.5.1.1 “Guidelines on the demonstration of additionality of small-scale project activities” Version 09. In such cases, project participants should also follow the Non-binding practice examples to demonstrate additionality for SSC project activities;	VVS	159	The project participant has referred to the “Guidelines on the demonstration of additionality of small-scale project activities” Version 09 for additionality demonstration. The proposed project activity comes under positive list of technology and automatically qualifies the additionality in accordance with	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			the "Guidelines on the demonstration of additionality of small-scale project activities" Version 09. Hence, Not Applicable		
B.5.1.1.1 Project participants shall provide an explanation to show that the project activity would not have occurred anyway due to at least one of the following barriers: a) Investment barrier: a financially more viable alternative to the project activity would have led to higher emissions; b) Technological barrier: 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; c) Barrier due to prevailing practice: prevailing practice or existing regulatory or policy requirements would have led to implementation of a technology with higher emissions; d) Other barriers: without the project activity, for another specific reason identified by the project participant, such as institutional barriers or limited information, managerial resources, organizational capacity, financial resources, or capacity to absorb new technologies, emissions would have been higher.	VVS	159	The project participant has referred to the "Guidelines on the demonstration of additionality of small-scale project activities" Version 09 for additionality demonstration. The proposed project activity comes under positive list of technology and automatically qualifies the additionality in accordance with the "Guidelines on the demonstration of additionality of small-scale project activities" Version 09	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
B.5.1.2 Any applicable additionality tool; or	VVS	159	The project participant has referred to the "Guidelines on the demonstration of additionality of small-scale project activities" Version 09 for additionality demonstration. The proposed project activity comes under positive list of technology and automatically qualifies the additionality in accordance with the "Guidelines on the demonstration of additionality of small-scale project activities" Version 09.	OK	OK
B.5.1.3 Guidelines for demonstrating additionality of microscale project activities", if the proposed project activity meets one of the following criteria: a) Type I: Project activities up to 5 MW that employ renewable energy as their primary technology; b) Type II: Energy efficiency project activities that aim to achieve energy savings at a scale of no more than 20 GWh per year; or c) Type III: Other project activities not included in Type I or Type II that aim to achieve GHG emissions reductions at a scale of no more than 20 ktCO ₂ e per year.	VVS	160	The proposed project activity is a Grid connected 15 MW Solar project activity. The project activity does not fall under micro scale project activities. Hence Not Applicable	OK	OK
B.5.2 If the start date of the project activity is prior to the date of publication of the PDD for the global stakeholder consultation, is evidence of the prior consideration of the CDM in accordance with applicable provisions related to the demonstration of	PDD		The start date of the project activity is 24/02/2012, which is prior to the global stakeholder consultation. Project participant has mentioned in section B.5 of the PDD that the intimation was sent	CL 4	OK

VALIDATION REPORT



CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
prior consideration of the CDM in the Project standard provided?			to UNFCCC regarding the project on 7/03/2012 and received by UNFCCC on 26/03/2012. The same has been cross checked from the UNFCCC website. However, PP is requested to provide the e-mail communication with DNA.		
B.5.2.1 Is the start date of the project activity, reported in the PDD, the earliest date at which either the implementation or construction or real action of a project activity begins?	VVS	106	The start date of the project activity is reported as 24/02/2012 in the PDD, which is the date of first purchase order released. Project Participant to provide the supporting evidence for the same.	CL 5	OK
B.5.2.2 If the project activity requires construction, retrofit or other modifications, is it ensured that the date of commissioning not considered as the project activity start date?	VVS	106	The proposed project activity is a new project activity, which requires construction and date of commissioning is not considered as start date of the project activity.	OK	OK
B.5.2.3 Is it a project activity with a start date on or after 02 August 2008, or before 02 August 2008?	VVS	106	The start date of the project activity is 24/02/2012, which is after 02/08/2008	OK	OK
B.5.2.4 For a project activity with a start date on or after 02 August 2008, are the following provisions to be satisfied:					
B.5.2.4.1 Has 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 within 180days of the project activity start date?	PS VVS	27 107	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 within 180days of the project activity start date. However, refer B.5.2 (above)	-	-

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
B.5.2.4.2 Do the project participants inform the secretariat of the progress of the project activity every subsequent two years after the initial notification, until the PDD regarding the project activity has been published for global stakeholder consultation or, a new baseline and monitoring methodology is proposed or a revision of an approved baseline and monitoring methodology is requested for the project activity before the start date?	PCP	9	The start date of the project activity is 24/02/2012 and PP informed UNFCCC on 26/03/2012, which is well within 180 days. And also the PP has used approved baseline and monitoring methodology. Hence, not applicable	OK	OK
B.5.2.5 For a project activity with a start date before 02 August 2008, are the following elements to be satisfied:	VVS	108			
B.5.2.5.1 Are evidence of their 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 provided?	PS VVS	28 108	The start date of the project activity is after 02 August 2008. Hence, Not Applicable	OK	OK
B.5.2.5.2 Are evidence that continuing and real actions were taken to secure CDM status for the project in parallel with its implementation provided?	PS VVS	28 108- 110	The start date of the project activity is after 02 August 2008. Hence, Not Applicable	OK	OK
B.5.2.5.3 Is an implementation timeline of the proposed CDM project activity provided?	PS	28(c)	The start date of the project activity is after 02 August 2008. Hence, Not Applicable	OK	OK
B.5.3 With respect to the section B.5.1 above, if investment					

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
analysis is used:					
B.5.3.1 Are all relevant assumptions and parameters used in the analysis listed?	DD		The project participant has referred to the <i>"Guidelines on the demonstration of additionality of small-scale project activities" Version 09</i> for additionality demonstration. The proposed project activity comes under positive list of technology and automatically qualifies the additionality in accordance with the <i>"Guidelines on the demonstration of additionality of small-scale project activities" Version 09</i> . Hence, Investment analysis has not been used	OK	OK
B.5.3.2 Is the latest version of the "Guidelines on the assessment of investment analysis" applied?	VVS	118	The project participant has referred to the <i>"Guidelines on the demonstration of additionality of small-scale project activities" Version 09</i> for additionality demonstration. The proposed project activity comes under positive list of technology and automatically qualifies the additionality in accordance with the <i>"Guidelines on the demonstration of additionality of small-scale project activities" Version 09</i> . Hence, Investment analysis has not been used	OK	OK
B.5.3.3 Is project activity one of the following cases in regards to investment analysis:	VVS	119			
B.5.3.3.1 The proposed project activity would produce no financial or economic benefits other than CDM-	VVS	119(a)	The project participant has referred to the <i>"Guidelines on the demonstration of additionality of small-scale project activities"</i>	OK	OK

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
related income;			Version 09 for additionality demonstration. The proposed project activity comes under positive list of technology and automatically qualifies the additionality in accordance with the "Guidelines on the demonstration of additionality of small-scale project activities" Version 09. Hence, Investment analysis has not been used		
B.5.3.3.2 The proposed project activity is less economically or financially attractive than at least one other credible and realistic alternative;	VVS	119(b)	The project participant has referred to the "Guidelines on the demonstration of additionality of small-scale project activities" Version 09 for additionality demonstration. The proposed project activity comes under positive list of technology and automatically qualifies the additionality in accordance with the "Guidelines on the demonstration of additionality of small-scale project activities" Version 09. Hence, Investment analysis has not been used	OK	OK
B.5.3.3.3 The financial returns of the proposed project activity would be insufficient to justify the required investment.	VVS	119(c)	The project participant has referred to the "Guidelines on the demonstration of additionality of small-scale project activities" Version 09 for additionality demonstration. The proposed project activity comes under positive list of technology and automatically qualifies the additionality in accordance with the "Guidelines on the demonstration of additionality of small-scale project activities" Version 09. Hence, Investment analysis has	OK	OK

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			not been used		
B.5.3.4 Has the accuracy of financial calculations carried out for investment analysis been verified as follows:	VVS	120			
B.5.3.4.1 Determine the suitability of the financial indicator selected by the project participants and conduct a thorough assessment of all parameters and assumptions used in calculating such financial indicators, and determine the accuracy and suitability of these parameters using available evidence and applying its expertise in relevant accounting practices	VVS	120(a)	The project participant has referred to the <i>"Guidelines on the demonstration of additionality of small-scale project activities" Version 09</i> for additionality demonstration. The proposed project activity comes under positive list of technology and automatically qualifies the additionality in accordance with the <i>"Guidelines on the demonstration of additionality of small-scale project activities" Version 09</i> . Hence, Investment analysis has not been used	OK	OK
B.5.3.4.2 Cross-check the parameters against third-party or publicly available sources, such as invoices or price indices	VVS	120(b)	The project participant has referred to the <i>"Guidelines on the demonstration of additionality of small-scale project activities" Version 09</i> for additionality demonstration. The proposed project activity comes under positive list of technology and automatically qualifies the additionality in accordance with the <i>"Guidelines on the demonstration of additionality of small-scale project activities" Version 09</i> . Hence, Investment analysis has not been used	OK	OK
B.5.3.4.3 Review, as appropriate, feasibility reports, public announcements and annual financial	VVS	120(c)	The project participant has referred to the <i>"Guidelines on the demonstration of</i>	OK	OK

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
reports related to the proposed project activity and the project participants			<i>additionality of small-scale project activities" Version 09</i> for additionality demonstration. The proposed project activity comes under positive list of technology and automatically qualifies the additionality in accordance with the <i>"Guidelines on the demonstration of additionality of small-scale project activities" Version 09</i> . Hence, Investment analysis has not been used		
B.5.3.4.4 Assess the correctness of computations carried out and documented by the project participants; and	VVS	120(d)	The project participant has referred to the <i>"Guidelines on the demonstration of additionality of small-scale project activities" Version 09</i> for additionality demonstration. The proposed project activity comes under positive list of technology and automatically qualifies the additionality in accordance with the <i>"Guidelines on the demonstration of additionality of small-scale project activities" Version 09</i> . Hence, Investment analysis has not been used	OK	OK
B.5.3.4.5 Assess, where applicable, the sensitivity analysis by the project participants to determine under what conditions variations in the result would occur, and the likelihood of these conditions.	VVS	120(e)	The project participant has referred to the <i>"Guidelines on the demonstration of additionality of small-scale project activities" Version 09</i> for additionality demonstration. The proposed project activity comes under positive list of technology and automatically qualifies the additionality in accordance with the <i>"Guidelines on the demonstration of additionality of small-scale project activities" Version 09</i> .	OK	OK

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			Version 09. Hence, Investment analysis has not been used		
B.5.3.5 If benchmark analysis is used:					
B.5.3.5.1 Is the benchmark clearly indicated?	DD		The project activity comes under positive list of technology and hence qualifies the additionality. Benchmark analysis has not been used	OK	OK
B.5.3.5.2 Is the type of benchmark applied suitable for the type of financial indicator presented?	VVS	121(a)	The project activity comes under positive list of technology and hence qualifies the additionality. Benchmark analysis has not been used	OK	OK
B.5.3.5.3 Does the risk premiums applied in determining the benchmark reflect the risks associated with the project type or activity?	VVS	121(b)	The project activity comes under positive list of technology and hence qualifies the additionality. Benchmark analysis has not been used	OK	OK
B.5.3.5.4 Is it reasonable to assume that no investment would be made at a rate of return lower than the benchmark?	VVS	121(c)	The project activity comes under positive list of technology and hence qualifies the additionality. Benchmark analysis has not been used	OK	OK
B.5.3.6 If cost comparison is used:					
B.5.3.6.1 Are the scenarios compared described?	DD		The project activity comes under positive list of technology and hence qualifies the additionality. Cost comparison has not been used	OK	OK
B.5.3.7 If PPs rely on values from FSR:	VVS	122			
B.5.3.7.1 Has the FSR been the basis of the decision to proceed with the investment in the project?	VVS	122(a)	The project activity comes under positive list of technology and hence qualifies the	OK	OK

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			additionality.		
B.5.3.7.2 Are the values used in the PDD and associated annexes fully consistent with the FSR? If inconsistencies occur, was the appropriateness of the values validated?	VVS	122(b)	The project activity comes under positive list of technology and hence qualifies the additionality.	OK	OK
B.5.3.7.3 On the basis of its specific local and 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?	VVS	122(c)	The project activity comes under positive list of technology and hence qualifies the additionality.	OK	OK
B.5.4 If barriers analysis is used:	DD				
B.5.4.1 Is the “Guidelines for objective demonstration and assessment of barriers” followed?	PS	48	The project activity comes under positive list of technology and hence qualifies the additionality. Barrier analysis has not been applied	OK	OK
B.5.4.2 Is it ensured that only the most relevant barriers selected?	DD		The project activity comes under positive list of technology and hence qualifies the additionality. Barrier analysis has not been applied	OK	OK
B.5.4.3 Is the credibility of the barriers justified with key facts and/or assumptions and the rationale?	DD		The project activity comes under positive list of technology and hence qualifies the additionality. Barrier analysis has not been applied	OK	OK
B.5.4.4 Is it ensured that issues that have a direct impact on the financial returns of the project activity are not considered as barriers but assessed by	VVS	125	The project activity comes under positive list of technology and hence qualifies the additionality. Barrier analysis has not been	OK	OK

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
investment analysis? This does not refer to either: (a) Risk related barriers (b) Barriers related to the unavailability of sources of finance for the project activity			applied		
B.5.4.5 Were the barriers determined as real?	VVS	126(a)	The project activity comes under positive list of technology and hence qualifies the additionality. Barrier analysis has not been applied	OK	OK
B.5.4.6 Were the barriers determined as preventing the implementation of the project activity but not the implementation of at least one of the possible alternatives?	VVS	126(b)	The project activity comes under positive list of technology and hence qualifies the additionality. Barrier analysis has not been applied	OK	OK
B.6 Emission reductions					
B.6.1 Explanation of methodological choices					
B.6.1.1 Does the PDD explain how the methods or methodological steps in the selected methodology, for calculating project emissions, baseline emissions, leakage emissions and emission reductions are applied?	PDD VVS	96	Explanation on the methods for calculating project emission. Leakage emission and emission reduction is provided in section b.6 of the PDD, in accordance with selected methodology AMS ID, version 17.	OK	OK
B.6.1.2 In case the methodology(ies) include different scenarios or cases, does the PDD indicate and justify which scenario or cases applies to the project activity?	PDD		The project participant has used "Tool to calculate emission factor of an electricity system" version 03.0.0 for calculation of Grid emission factor. The webhosted PDD indicates and justify the scenarios applies to the project activity.	OK	OK

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
B.6.1.3 In case the methodology(ies) allow different default values, does the PDD indicate and justify which of the default values have been chosen for the project activity?	PDD		No default values have been applied. Grid emission factor is calculated based on the CEA data base, which is publically available data.	OK	OK
B.6.2 Data and parameters fixed ex ante (section B.6.2 of PDD)					
B.6.2.1 If data and parameters will not be monitored throughout the crediting period of the proposed project activity but have already been determined and will remain fixed throughout the crediting period, are all data sources and assumptions: a) Appropriate and correct? b) Applicable to the proposed CDM project activity? c) Resulting in a conservative estimate of the emission reductions?	PDD VVS	98	The parameter “Combined grid emission factor” will not be monitored throughout the crediting period and will remain fixed. The data source used for calculating Combined grid emission factor is CEA data base version 07, which is publically available data and applicable to the project activity.	OK	OK
B.6.2.2 For each piece of data or parameter, are tables provided in accordance with the instructions?	PDD		The data or parameter are provided in table, in accordance with the instruction	OK	OK
B.6.3 Ex ante calculations of emission reductions					
B.6.3.1 Is 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 provided?	PDD		Transparent ex-ante calculation of project emission, baseline emission and leakage emission is provided in section B.6.3 of the PDD. All relevant equations are applied in accordance with the applied approved methodology. During document review by the validation team has observed that the maximum	CL 6	OK

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			efficiency of the panel is 15%, as mentioned in the specification provided by the manufacturer "Trina Solar". Project Participant is requested to clarify how the PLF has been calculated for this project activity.		
B.6.3.2 Is the information how each equation is applied, in a manner that enables the reader to reproduce the calculation, provided?	PDD		The information on how each equation is applied is provided in a manner that enables the reader to reproduce the calculation.	OK	OK
B.6.3.3 Is the information of additional background information and/or data provided in Appendix 4, including relevant electronic spreadsheets?	PDD		No additional information has been provided in Appendix 4	OK	OK
B.6.3.4 Is a sample calculation for each equation used provided, substituting the values used in the equations?	PDD		Yes, a sample equation for each equation used is provided, by substituting the values in the equation.	OK	OK
B.6.3.5 If the proposed small-scale CDM project activity involves more than one component, does the project participants provide ex ante calculations of baseline, project and leakage GHG emissions as well as GHG emission reductions for each year of the crediting period and for each component separately?	PDD PS	90	The proposed small-scale CDM project activity does not involve more than one component	OK	OK
B.6.4 Summary of the ex ante estimates of emission reductions					
B.6.4.1 Are the results of the ex ante estimation of emission reductions for all years of the crediting	PDD		The results of the ex ante estimation of emission reductions for all years of the	CAR 4	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
period, provided in a tabular format?			crediting period are provided in a tabular format, but not in accordance with the "Guidelines for completing the project design document form for small scale CDM project activities." Version 01.0.		
B.6.4.2 If the project activity involves more than one component, does the PDD provide a separate table for each of the component or each of the selected methodology(ies), and whether the PDD provide a table showing the aggregate emission reductions of the project activity?	PDD		The proposed small-scale CDM project activity does not involve more than one component	OK	OK
B.7 Monitoring Plan					
B.7.1 Data and parameters to be monitored					
B.7.1.1 Is specific information on how the data and parameters that need to be monitored would actually be collected during monitoring included?	PDD		Specific information on how data and parameter that need to be monitored would actually be collected is provided in section B.7.1 of the PDD. However, Refer B.7.1.2.3 (below)	OK	OK
B.7.1.2 For each data or parameter, is the information completed, in a tabular format:					
B.7.1.2.1 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.	PDD		The source of data that will actually be used for the proposed project activity is provided in section B.7.1 of the PDD	OK	OK
B.7.1.2.2 Is an estimate of the data/ parameter that will	PDD		Estimate of the parameter $EG_{BL,y}$ is provided	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
be monitored during the crediting period provided?			as 24,873		
B.7.1.2.3 Where data or parameters are to be measured, does it specify the measurement methods and procedures, standards to be applied, accuracy of the measurements, person/entity responsible for the measurements, and, in case of periodic measurements, the measurement intervals?	PDD		The measurement methods and procedures, standards to be applied, accuracy of the measurements, person/entity responsible for the measurements is provided in section B.7.1 of the PDD. However, The monitoring procedure described in section B.7.1 of the PDD is not in line with the procedure that would be followed at the site, which was noted during site visit and also the location of the energy meters are not clear in the description. The type of energy meter to be used whether ABT / Tri Vector meter is not stated in the webhosted PDD.	CL 7	OK
B.7.1.2.4 Is a description of the QA/QC procedures including the calibration procedures, where applicable, provided?	PDD		QA/QC procedure including the calibration procedure has been described in section B.7.1 of the PDD.	OK	OK
B.7.1.2.5 Is the purpose of data indicated?	PDD		The purpose of data is indicated as baseline emissions.	OK	OK
B.7.1.3 Is this monitoring plan based on the approved monitoring methodology applied to the proposed CDM project activity?	VVS	131	As per the approved monitoring methodology the parameter $EG_{BL,Y}$ need to be monitored and the same has been applied in the PDD.	OK	OK
B.7.1.4 Does the monitoring plan contain all necessary	VVS	132(a)	As per the approved monitoring	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
parameters?			methodology the parameter $EG_{BL,Y}$ need to be monitored and the same has been applied in the PDD		
B.7.1.5 Do the means of monitoring described in the plan comply with the requirements of the methodology including applicable tool(s)?	VVS	132(a)	The monitoring described is in line with the requirement of the applied methodology	OK	OK
B.7.1.6 Are the monitoring arrangements described in the monitoring plan feasible within the project design?	VVS	132(b)	The monitoring arrangement described in the monitoring plan is feasible within the project design	OK	OK
B.7.1.7 Are the 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?	VVS	132(b)	The means of implementation of the monitoring plan is sufficient to ensure that the emission reductions achieved by the project activity can be verified.	OK	OK
B.7.2 Sampling plan					
B.7.2.1 Are there any data and parameters monitored in section B.7.1 above to be determined by a sampling approach?	PDD		No sampling approach is used in the project activity. Hence Not Applicable	OK	OK
B.7.2.2 Is a description of the sampling plan provided in accordance with the recommended outline for a sampling plan in the "Standard for sampling and surveys for CDM project activities and programme of activities"?	PDD		No sampling approach is used in the project activity. Hence Not Applicable	OK	OK
B.7.3 Other elements of monitoring plan					
B.7.3.1 Is the operational and management structure,	PDD		The operational and management structure	OK	OK

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
that the project operator will implement in order to monitor emission reductions and any leakage generated by the project activity, described in the PDD?	PS	56(a)	that the project participant will implement in order to monitor emission reduction generated by project activity is described in section B.7.3 of the PDD		
B.7.3.2 Are the responsibilities for and institutional arrangements for data collection and archiving clearly indicated?	PDD PS	56(c)	The project participant mentioned that the data will be collected electronically as well as in form of log book in section B.7.3 of the PDD	OK	OK
B.7.3.3 Does the monitoring plan include provisions to ensure that data monitored and required for verification and issuance be kept and archived electronically for two years after the end of the crediting period or the last issuance of CERs, whichever occurs later?	PS	56(b)	The project participant mentioned that the data will be collected electronically as well as in form of log book in section B.7.3 of the PDD. Also mentioned that the data monitored and required for verification and issuance will be kept and archived for two years after the end of the crediting period or the last issuance of CERs, whichever occurs later.	OK	OK
B.7.3.4 Does the monitoring plan include uncertainty levels, methods and the associated accuracy level of measuring instruments to be used for various parameters and variables?	PS	56(e)	The project participant has provided the description of Emergency preparedness, however what would be the procedure adopted if both the main and check meter fails at the same time and Data uncertainty explicitly. Project participant to clarify what would be procedure adopted for determining the net electricity supplied to the grid, in case the date of registration does not match with the billing cycle.	CL 8	OK

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			And also PP is requested to provide the supporting for the statement mentioned as the training will be provided to O&M team in section B.7.3 of the PDD		
B.7.3.5 Does the monitoring plan include specifications of the calibration frequency for the measuring equipments?	PS	56(f)	The calibration frequency is mentioned as once in three years	OK	OK
C. Duration and crediting period					
C.1 Duration of project activity					
C.1.1 Start date of project activity					
C.1.1.1 Is the start date of the project activity stated, in the format of DD/MM/YYYY?	PDD		The start date of the project activity is provided in DD/MM/YY format in section C.1.1 of the PDD	OK	OK
C.1.1.2 Does it describe how the start date has been determined and provide evidence to support this date?	PDD		The start date of the project activity is reported as 24/02/2012 in the PDD, which is the date of first purchase order released. However, PP is to provide the supporting document for start date of the project activity.	(CL 5)	OK
C.1.2 Expected operational lifetime of project activity					
C.1.2.1 Is the expected operational lifetime of the project activity stated in years and months?	PDD		Expected life time of the project activity is stated in Years and Months as 25 years and 00 months	OK	OK
C.2 Crediting period of project activity					
C.2.1 Type of crediting period					

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
C.2.1.1 Is the type of crediting period chosen for the project activity stated?	PDD		The project participant has chosen the renewable crediting period.	OK	OK
C.2.1.2 In case a renewable crediting period was chosen, does it indicate whether it is the first, second or third?	PDD		It is indicated that the chosen crediting period is renewable crediting period and it is first crediting period	OK	OK
C.2.2 Start date of crediting period					
C.2.2.1 Is the start date of crediting period stated in the format of DD/MM/YYYY?	PDD		The start date of the crediting period is mentioned in DD/MM/YY format. However, the date mentioned has already ceased and same is not in accordance with the provisions of the CDM Modalities and Procedures.	CAR 5	OK
C.2.3 Length of crediting period					
C.2.3.1 Is the length of crediting period stated in years and months?	PDD		The length of crediting period is mentioned in years and Months format as 7years 00 Months	OK	OK
D. Environmental impacts					
D.1 Analysis of the environmental impacts					
D.1.1 Does the host party require to carry out an analysis of the environmental impacts of the proposed small-scale CDM project activity?	PDD PS	99	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
D.1.2 If yes, is a summary of the analysis of the	PDD PS	99	Not Applicable	OK	OK

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
environmental impacts of the project activity and references to all related documentation provided?					
E. Local stakeholder consultation					
E.1 Solicitation of comments from local stakeholders					
E.1.1 Did the project participants complete a local stakeholder consultation process and that due steps were taken to engage stakeholders and solicit comments for the proposed project activity?	VVS	138	The project participant had organized the local stakeholder meeting on 26/04/2012 and personal invitations for the meeting were sent to the identified stakeholders on 12/04/2012. The same was ascertained by performing the interview with local stakeholders during validation site visit.	OK	OK
E.1.2 Is the process by which comments from local stakeholders have been invited provided?	PDD		The process by which comments from local stakeholders have been invited is provided in section E.1 of the PDD. The same is cross checked with the stakeholder consultation report submitted by PP.	OK	OK
E.2 Summary of comments received					
E.2.1 Are stakeholders that have made comments identified?	DD		The project participant has identified the stakeholders who had made the comment.	OK	OK
E.2.2 Have comments by local stakeholders that can reasonably be considered relevant for the proposed CDM project activity been invited?	VVS	139 (a)	The stakeholders appreciated the project activity and the same has been verified while interviewing the local stakeholders during the site visit on 27/08/2012.	OK	OK
E.2.3 Is the summary of comments provided complete?	DD VVS	139 (b)	The comments provided by the PP in the PDD are complete.	OK	OK

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
E.3 Report on consideration of comments received					
E.3.1 Is information provided to demonstrate that all comments received have been considered?	DD VVS	139 (c)	The Project participant has mentioned that the stakeholders have appreciated the project activity and no negative comments have been identified. The same has been verified through interview with local stakeholders during site visit on 27/08/2012.	OK	OK
F. Approval and authorization					
F.1 General					
F.1.1 Is it indicated whether the letter(s) of approval from Party(ies) available at the time of submitting the PDD to the validating DOE?	DD		The project participant has mentioned that the application for the Approval from host country is going to be submitted.	OK	OK
F.2 Approval			INDIA	Not Applicable	
F.2.1 Has the DNA of each Party indicated as being involved in the proposed CDM project activity in section A.4 of the PDD provided a written letter of approval?	VVS	38	The project participant has not provided the letter of approval from host country	CL 9	OK
F.2.2 Does the letter of approval from DNA of each Party confirm that : (a) The Party is a Party of the Kyoto Protocol (b) The participation is voluntary (c) In the case of the host Party, the proposed CDM project activity contributes to the sustainable development of the country	VVS	39	The project participant has not provided the letter of approval from host country	(CL 9)	OK

VALIDATION REPORT



CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
(d) Refers to the precise proposed CDM project activity title in the PDD being submitted for registration					
F.2.3 Is(are) the letter(s) of approval unconditional with respect to (F.2.2) above?	VVS	40	The project participant has not provided the letter of approval from host country	(CL 9)	OK
F.2.4 Has(ve) the letter(s) of approval been issued by the respective Party's DNA? If there is doubt with respect to (F.2.2) above, was it verified with the DNA that the letter of approval is valid for the proposed CDM project activity under validation?	VVS	41,42	The project participant has not provided the letter of approval from host country	(CL 9)	OK
F.2.5 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?	VVS	51	The project participant has not provided the letter of approval from host country	(CL 9)	OK
F.3 Authorization					
F.3.1 Has each project participant been authorized by at least one Party involved in a letter of approval?	VVS	45	The project participant has not provided the letter of approval from host country	(CL 9)	
F.3.2 Is the information in tabular form in the PDD consistent with the contact information for project participants provided?	VVS	46	The information provided in tabular form in the PDD is consistent with the contact information of project participant mentioned in Appendix I of the PDD	OK	OK
F.3.3 Are any entities other than those approved as project	VVS	47	No, other entities are included in the PDD	OK	OK

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
participants included in the PDD?			than the approved project participant.		
F.3.4 Has the approval of participation issued from the relevant DNA? And if in doubt, was it verified with the DNA that the approval of participation is valid for the proposed CDM project participants?	VVS	48	The project participant has not provided the letter of approval from host country	(CL 9)	OK
Part III Others					
A. Appendixes of PDD					
A.1 Appendix 1: Contact information of project participants	PDD PS	99			
A.1.1 For each organization listed in section A.4 of PDD, is the table in PDD completed, with the following mandatory fields: Organization, City, postcode, Country, Telephone and Fax, e-mail and Name of contact person?	PDD PS	99	All the relevant contact information of the organization mentioned in section A.4 of the PDD is mentioned in Appendix I of the PDD.	OK	OK
A.2 Appendix 2: Affirmation regarding public funding					
A.2.1 If applicable, is the affirmation obtained from Parties providing public funding to the project Activity attached?	PDD PS	99	PP to provide the proof source of funding and also to clarify whether the project is eligible for any Subsidy / incentive under any State Or Central Government Programs.	CL 10	OK
A.3 Appendix 3: Applicability of the selected methodology(ies)					
A.3.1 Is the background information on the applicability of the selected methodology provided?	PDD PS	99	Yes, Additional information on the applicability of the selected methodology has been provided in Appendix 3	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
A.4 Appendix 4: Further background information on ex ante calculation of emission reductions					
A.4.1 Is the background information on the ex ante calculation of emission reductions provided?	PDD PS	99	No, Information provided. It is indicated that all the information is provided in section B.6 of the PDD	OK	OK
A.5 Appendix 5: Further background information on monitoring plan					
A.5.1 Is the background information used in the development of the monitoring plan provided?	PDD PS	99	No, Information provided. It is indicated that all the information is provided in section B.7 of the PDD. However, refer B.7.3.4 (above)	-	-
A.6 Appendix 6: Summary of post registration changes					
A.6.1 Is a summary of the post registration changes provided?	PDD PS	99	The proposed project activity is in validation stage. Hence, Not Applicable	OK	OK
B. Global Stakeholder Consultation					
B.1.1 Is there any comment on the PDD of the proposed project activity received during Global Stakeholder Consultation process?	VVS	34	Yes, Comments from Global stakeholders has been received and the same have been summarized in Appendix B below.		
B.1.2 If yes, have all comments been taken into account during the validation of the proposed project activity?	VVS	35	Yes, all the comments been taken into account during the validation of the proposed project activity.	OK	OK
B.1.3 If comments indicate that the proposed project activity does not comply with the CDM requirements and are not substantiated, is there any further clarification	VVS	36	N.A	OK	OK

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
from the entity providing the comment?					
B.1.4 If yes, how comments received have been taken due account?	VVS	36	N.A	OK	OK
B.1.5 If no, are the comments as originally provided proceeded to assess?	VVS	36	The comments are provided as original to assess in Appendix of this Draft report	OK	OK
C. Modalities of Communications (MoC)					
C.1.1 Has the corporate identity of all project participants and focal points included in MoC statement, as well as the personal identities, including specimen signatures and employment status, of their authorized signatories been validated by:	VVS	53			
C.1.1.1 Directly checking evidence for corporate, personal identity and other relevant documentation; or	VVS	54(a)	The project participant has not provided the modalities of communication in respect to the project activity	CL 11	OK
C.1.1.2 Notarized documentation; or	VVS	54(b)	The project participant has not provided the modalities of communication in respect to the project activity	(CL 11)	OK
C.1.1.3 Written confirmation from the project participant or the coordinating/managing entity that all corporate and personal details, including specimen signatures, are valid and accurate.	VVS	54(c)	The project participant has not provided the modalities of communication in respect to the project activity	(CL 11)	OK
C.1.2 If (C.1.1.3) above was chosen, is it ensured that the MoC statement is received from a project participant with whom the DOE has a contractual relationship?	VVS	55	The project participant has not provided the modalities of communication in respect to the project activity	(CL 11)	OK
C.1.3 If (C.1.1.3) above was chosen, is it ensured that the	VVS	56	The project participant has not provided the	(CL 11)	OK

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
official who submits the MoC statement to the DOE and the official who signed the written confirmation (if a different person) is/are duly authorized to do so on behalf of the respective project participant?			modalities of communication in respect to the project activity		
C.1.4 If it is unable to validate the requirements by applying C.1.1.1 to C.1.1.3 above, are any further validation activities performed?	VVS	57	The project participant has not provided the modalities of communication in respect to the project activity	(CL 11)	OK
C.1.5 Has the latest version of the form “Modalities of Communication statement” (F-CDM-MOC) been used?	VVS	60(a)	The project participant has not provided the modalities of communication in respect to the project activity	(CL 11)	OK
C.1.6 Is the information required as per F-CDM-MOC, including its annex 1, correctly completed?	VVS	60(b)	The project participant has not provided the modalities of communication in respect to the project activity	(CL 11)	OK
C.1.7 Do the project participant’s authorized signatories signing the F-CDM-MOC correspond to the project participant’s authorized signatories included in F-CDM-MOC, annex 1?	VVS	60(c)	The project participant has not provided the modalities of communication in respect to the project activity	(CL 11)	OK

TABLE 2 RESOLUTIONS OF CORRECTIVE ACTION AND CLARIFICATION REQUESTS

Draft report clarifications and corrective action requests by validation team	Ref. To checklist question in Table 1	Summary of project owner response	Validation team conclusion
CAR 1 Total GHG emission reductions for the entire chosen crediting period is not provided.	A.1.4	The total GHG emission reductions for the entire chosen crediting period have now been provided in section A.1 of the PDD.	The total GHG emission reduction for the entire chosen crediting period is provided in section A.1 of the PDD. CAR 1 is Closed
CAR 2 The project participant has not provided information regarding Monitoring equipments and their location in section A.3 of the Webhosted PDD.	A.3.1.2	The section A.3 of the PDD has been revised to include information regarding monitoring equipments and their location.	The information on monitoring equipments and their location in respect to the project activity is provided in section A.3 of the PDD, the same was noted during interview with project representatives. CAR 2 Closed
CAR 3 a) The project participant has not mentioned how the same types and levels of services provided by the project activity would have been provided in the baseline scenario. b) The project participant has not mentioned about the following details in section A.3 of the PDD, Whether the equipments used in the project activity	A.3.4 A.3.9	a) Section A.3 of the PDD has been revised to mention how the same types and levels of services provided by the project activity would have been provided in the baseline scenario. b) Section A.3 of the PDD has been revised to mention about how the solar PV modules in the project activity are independently certified	a) The project participant has mentioned that the same type and level of services provided by the project activity would have been provided by the NEWNE grid, which is also the baseline for the project activity. b) The project participant mentioned that the solar PV modules in the

VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. To checklist question in Table 1	Summary of project owner response	Validation team conclusion
follows any International standards for the performance of the equipment		by international certification bodies under recognized standards that include IEC61215, IEC61730 and UL1703.	project activity are independently certified by international certification bodies under recognized standards that include IEC61215, IEC61730 and UL1703. The validation team has checked the same with the technical data sheet provided by module manufacturer i.e. Trina Solar CAR 3 is Closed
CAR 4 The results of the ex ante estimation of emission reductions for all years of the crediting period are provided in a tabular format, however the same is not in accordance with the "Guidelines for completing the project design document form for small scale CDM project activities." Version 01.0.	B.6.4.1	The table in section B.6.4 has been corrected as per the "Guidelines for completing the project design document form for small scale CDM project activities." Version 01.0.	The project participant has revised the section B.6.4 in accordance with the "Guidelines for completing the project design document form for small scale CDM project activities." Version 01.0. CAR 4 is Closed
CAR 5 The start date of the crediting period is mentioned in DD/MM/YY format. However, the date mentioned has already ceased and same is not in accordance with the provisions of the CDM Modalities and Procedures.	C.2.2.1	The start date of the crediting period has been revised in section C.2.2 of the PDD.	The start date of the crediting period has been changed to 24/12/2012 in section C.2.2, which is accordance with the provisions of the CDM Modalities and Procedures.

VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. To checklist question in Table 1	Summary of project owner response	Validation team conclusion
CL 1 The project participant has mentioned that the life time of the whole installation as 25 years in section A.3 of the PDD. Please provide the supporting document for the same. The size of project activity is 15 MW, PP to clarify how the size of project activity would remain under the small scale limits for the chosen crediting period and the equipments installed at the project site are new.	A.3.1.1	The lifetime of the solar PV modules proposed to be installed in the project activity is 25 years and the same can be verified from their technical specifications that have been provided. The Detailed Project Report for the project activity prepared by Arbutus Consultants Pvt. Ltd. is being submitted as evidence for the size of the project activity (Refer Annexure 8 for details on capacity and number of modules of each type). The purchase orders placed for the solar PV panels are also being submitted to the DOE. It can be verified from these orders that the equipments installed at the project site are new. Further, the model, type and rated capacity of the modules have also been revised in section A.3 of the PDD so as to be consistent with the purchase orders and DPR.	CAR 5 is Closed The lifetime of the solar PV modules proposed to be installed in the project activity is 25 years, as mentioned in technical data sheet provided by the module manufacturer i.e. Trina Solar. Also the validation team has checked the DPR prepared by “Arbutus Consultants Pvt. Ltd.”, which clearly mentions the technical specification and capacity of the project activity. To ascertain that the equipments installed are new, project participant has also provided the copies of the Purchase Order issued to Trina Solar, dated 27/06/2012 and also revised the rated capacity of the modules to be installed at the site in accordance with DPR and Purchase order. CL 1 is Closed

VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. To checklist question in Table 1	Summary of project owner response	Validation team conclusion
CL 2 The project participant has not provided any reference or documents in appendix 3 of the PDD, which has been used as a basis for justification.	B.2.5	Section B.2 and Appendix 3 of the PDD have been revised to include references to documents that have been used as basis for justification of compliance with the applicability criteria of the methodology.	The project participant has mentioned the reference of documents, which has been used as a basis of justification and also the documents are provided. CL 2 is Closed
CL 3 The PDD explains and justify the key assumptions and rationale used to establish baseline in section B.4 of the PDD. However, project participant to justify the appropriateness of source of $EG_{BL,Y}$.	B.4.3	The quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in year y ($EG_{BL,y}$) shall be referred from the monthly electricity generation report uploaded on State Local Dispatch Centre website. The same has been revised in section B.4 of the PDD.	The appropriate source of the parameter $EG_{BL,Y}$ is provided as "monthly electricity generation report uploaded on State Local Dispatch Centre website " in section B.4 of the PDD. CL 3 is Closed
CL 4 The start date of the project activity is 24/02/2012, which is prior to the global stakeholder consultation. Project participant has mentioned in section B.5 of the PDD that the intimation was sent to UNFCCC regarding the project on 7/03/2012 and received by UNFCCC on 26/03/2012. The same has been cross checked with the	B.5.2	The PP informed the UNFCCC and the host country Designated National Authority (DNA) of its intention to seek CDM for the proposed project activity vide a notification sent by email on 20 th March 2012 and the project was uploaded on the prior consideration section of UNFCCC website on 26 th March 2012.	The project participant has provided the e-mail communication with DNA, which clearly indicates that the intimation was sent to NCDMA (Indian DNA) on 20/03/2012 and acknowledgement was received on 21/03/2012. CL 4 is Closed

VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. To checklist question in Table 1	Summary of project owner response	Validation team conclusion
UNFCCC website. However, PP is requested to provide the e-mail communication with DNA.		The email communication with UNFCCC as well as host country Designated National Authority (DNA) is being submitted.	
CL 5 The start date of the project activity is reported as 24/02/2012 in the PDD, which is the date of first purchase order released. However, PP is to provide the supporting document for start date of the project activity.	B.5.2.1	The start date of the project activity has been taken as the date of release of first purchase order for the project activity that was for supply of oil filled transformers. The same has been provided to the DOE.	The project participant has provided the first purchase order released to Voltamp Transformers Limited, dated 24/02/2012 and the same is considered as start date of the project activity. CL 5 is Closed
CL 6 Transparent ex-ante calculation of project emission, baseline emission and leakage emission is provided in section B.6.3 of the PDD. All relevant equations are applied in accordance with the applied approved methodology. During document review by the validation team has observed that the maximum efficiency of the panel is 15%, as mentioned in the specification provided by the manufacturer "Trina Solar". Project Participant is requested to clarify how	B.6.3.1	The Plant Load Factor and corresponding energy generation had been considered as 18.929% and 24,873 MWh respectively in the webhosted PDD based on an independent third party energy generation assessment study carried out for the project activity. The same is being submitted to the DOE. However, this study was based on REC make solar PV modules. The design of the project activity was subsequently changed to Trina make	The validation team is not able to conclude on why PLF was high during the second time of assessment for the same site even though the capacity of solar panels were similar between the two suppliers, hence as conservative approach PLF of 18.929% was considered by the validation team. CL 6 is Closed

Draft report clarifications and corrective action requests by validation team	Ref. To checklist question in Table 1	Summary of project owner response	Validation team conclusion
the PLF has been calculated for this project activity.		solar PV modules due to availability and supply constraints for REC modules. Therefore, the Plant Load Factor and corresponding energy generation have now been revised to 20.524% and 26,969 MWh respectively in the PDD based on another independent third party energy generation assessment study that was conducted by Arbutus Consultants Pvt. Ltd. for the Trina make solar PV modules. The same is also being submitted to the DOE.	
CL 7 The measurement methods and procedures, standards to be applied, accuracy of the measurements, person/entity responsible for the measurements is provided in section B.7.1 of the PDD. However, The monitoring procedure described in section B.7.1 of the PDD is not in line with the procedure that would be followed at the site, which was noted during site visit and also the location of the energy meters are not clear in the description. The type of energy meter to be used	B.7.1.2.3	Section B.7.1 of the PDD has been revised to include the location as well as the type of meters to be used in the project activity.	The project participant has revised the PDD and mentioned that the meters are of ABT type with accuracy class of 0.2s, main meter will be installed at the project site and check meter will be installed at Grid substation. CL 7 is Closed

VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. To checklist question in Table 1	Summary of project owner response	Validation team conclusion
whether ABT / Tri Vector meter is not stated in the webhosted PDD.			
CL 8 The project participant has provided the description of Emergency preparedness, however what would be the procedure adopted if both the main and check meter fails at the same time and Data uncertainty explicitly. Project participant to clarify what would be procedure adopted for determining the net electricity supplied to the grid, in case the date of registration does not match with the billing cycle. And also PP is requested to provide the supporting for the statement mentioned as the training will be provided.	B.7.3.4	In case both the main and check meter are found to be outside the acceptable limits of accuracy or faulty or not functioning properly, both the meters shall be calibrated immediately and the error percentage found in the main meter during its calibration shall be applied to its metered energy data for the entire period since its last calibration to obtain the corrected value of net electricity exported to the grid. In case the dates of a particular monitoring period do not match with the dates of the billing cycle, the net electricity exported to the grid would be calculated from: Data collected by DMPL from the ABT compliant main meter installed at the plant end and recorded in the daily log books The project activity is currently under implementation. After commissioning,	Project participant mentioned, if case both the main and check meter are found to be outside the acceptable limits of accuracy, both the meters will be calibrated immediately and the error percentage found in the main meter during its calibration shall be applied to its metered energy data for the entire period since its last calibration and also in case the dates of a particular monitoring period do not match with the dates of the billing cycle, the net electricity exported to the grid is considered from the daily generation log book CL 8 is Closed

VALIDATION REPORT



Draft report clarifications and corrective action requests by validation team	Ref. To checklist question in Table 1	Summary of project owner response	Validation team conclusion
		an O&M contractor is proposed to be selected to carry out the O&M activities for the project activity. The O&M contractor would employ experienced personnel at the plant and ensure that requisite training of personnel is carried out. Since the same would be done by the O&M contractor, the statement has been removed from the revised PDD.	
CL 9 The project participant has not provided the letter of approval from host country	F.2.1	The Host Country Approval has been provided.	PP has provided the Host Country Approval, dated 06/11/2012 CL 9 is Closed
CL 10 PP to provide the proof source of funding and also to clarify whether the project is eligible for any Subsidy / incentive under any State Or Central Government Programs.	Part III – A.2.1	The funding for the project activity has been sourced from internal sources and debt funding. No public funding has been availed for the project activity from parties included in Annex I. An undertaking to this effect is being submitted. The project activity is under the Gujarat Solar Power Policy 2009 and is not eligible for any subsidy / incentive under the state or central	The project participant has confirmed that the funding for the project activity has not been sourced from any Annex I country and also not eligible for any other subsidy/incentive under state or central government programs, as the proposed project activity is developing under “the Gujarat Solar Power Policy 2009” CL 10 is Closed

Draft report clarifications and corrective action requests by validation team	Ref. To checklist question in Table 1	Summary of project owner response	Validation team conclusion
CL 11 The project participant has not provided the modalities of communication in respect to the project activity	Part III – C.1.1.1	government programs. The modalities of communication for the project activity are being provided and Annex I of the PDD is being made consistent with the same.	The project participant has provided dully filled Modalities of communication in respect to the project activity and also the name of the authorized person mentioned in the MOC and Annex-I of the PDD made consistent. CL 11 is Closed

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 07/07/2011 and invited comments till 05/08/2012 by Parties, stakeholders and non-governmental organizations. The table below describes how due account of the comments received for the CDM project "Solar PV Power Project by DMPL in Fatepur, Gujarat." by Dreisatz MySolar24 (P) Ltd. was taken by Bureau Veritas Certification.

Sr. No.	Details of the commenter	Comment [unedited]	Response by project participant	Explanation on how account is taken by DOE
1	Paryavaraniy a Vikas Kendra	Public consultation was carried out wrongly. only selected people were invited without any advertisement in the local news paper. This is done intentionally to avoid participation of real stakeholders. How come project propent can decide who will be present in the consultation. This is observed in earlier projects also. This needs to be stopped immediately. I suggest that the public consultation needs to be held again and a strict guideline needs to be	The villagers and representatives of Fatepur village along with the employees of DMPL were considered to be the important stakeholders in the project activity. The same were invited through personal invitation letters and their concerns were addressed during the meeting.	The project participant has conducted the global stakeholder consultation on 26/04/2012 and the local villagers were invited on 12/04/2012 through personal Invitation. The validation team has verified the same with the invitation letter, minutes of meeting of local stakeholder consultation and interview with the local stakeholder conducted during site visit on 27/08/2012. This query is Closed

VALIDATION REPORT



		prepared and strictly followed.		
2	Paryavaraniy a Vikas Kendra	Give details of land aquisition and the type of land to be aquired, compensation to be given to individuals or, local self governments. Give specific details of the type of constrcutino acitivities. Details of employment generation.	Dry land has been purchased for the project activity directly from the land owners on willing seller – willing buyer process. Suitable commensuration has been paid to the land owners. The land is being used for solar PV power generation. Employment would be provided to about 20 skilled and 150 unskilled people directly in the project activity. The PDD for the project activity has been prepared as per the Guidelines for completing the Project Design Document form for small-scale CDM project activities Version 1.0.	The project participant has purchased the dry land for the proposed project activity, the same is verified by the ESIA (Environmental Social and Impact Assessment) carried out by the third party i.e. June 2012 The private land was purchased with appropriate commensuration paid to the land owners and also there will be employment generation for the local villagers, the same was confirmed with the interview conducted during site visit. This Query is Closed
3	Mahesh Pandya	1. What is the relation of two companies DMPL & MMPL? 2. Both PDDs comparison shows same company address and same contact person. In the case if this is sister organization, why two	1. The project activity is being implemented by Dreisatz MySolar24 (P) Ltd. that is a separate legal entity. 2. The project activity is being implemented by Dreisatz MySolar24 (P)	1. The “Dreisatz MySolar24 (P) Ltd.” DMPL is the project participant to the project activity, which is a separate entity and the same has been verified with the certificate of incorporation submitted by the project participant signed by Registrar of Companies.

VALIDATION REPORT



		wind based power plant of exactly same 14.99 MW in very adjacent location can not be bundled? 3. Description in section A.6 is misleading as same company has tried to register two different project of similar kind in same area. 4. Why this location has been chosen for this project? 5. Will this project have impact on temperature in surrounding area? 6. What would be impact of negative environmental conditions of area upon project? What would be alternatives in that case? 7. How many skilled/unskilled people from surrounding area will be employed at this project during commissioning and operation? 8. What is Complaint redress mechanism of a company, in case of villagers want to complain about solar panels?	Ltd. that is a separate legal entity and the project activity is not a wind based power plant. 3. The project activity is being implemented by Dreisatz MySolar24 (P) Ltd. There are no other project activities by this entity in the region. 4. Based on technical assessment of solar irradiation and other factors such as availability of land, policy and regulatory environment, rail and road connectivity, the project site was found to be suitable for implementation of the solar PV power project. 5. The project will not have any impact on temperature of the surrounding area. 6. The project activity has no significant impact on the environment. Ministry of Environment & Forests vide their OM J-	This Point is Closed 2. The proposed project activity is a grid connected solar project activity. And there is no wind project in the name of the project participant. This Point is Closed 3. The project activity is being implemented by Dreisatz MySolar24 (P) Ltd. There are no other project activities by the same entity in the same region. The validation team has verified the same with UNFCCC website and site visit. This Query is Closed. 4. The validation team has reviewed the Detail project report prepared by third party i.e. Arbutus Consultants Private Limited and hence based on technical assessment of solar irradiation and other factors such as availability of land, policy and regulatory environment, rail and road connectivity, the project site was found to be suitable for implementation of the solar PV power project.
--	--	---	---	---

		11013/41/2006 –IA II(I) dated 13th May 2011 has affirmed this and exempted the Solar PV power plants from Environment Impact Assessment and Environmental Clearance requirement. 7. The project activity would employ about 20 skilled and 150 unskilled people directly during construction of the project activity. About 20 people (4 skilled and 16 unskilled) would be employed after its commissioning. 8. Grievances (if any) can be raised directly to the DMPL Staff or Site Engineers or Shift-In-charges Engineers and the same would be resolved by the O&M Head in consultation with the affected party and/or Panchayat / relevant local statutory body.	This Point is closed 5. The proposed project activity is solar project, which produces electricity using solar energy. Hence the project will not have any impact on the temperature of surrounding. This point is Closed 6.The project activity has no significant impact on the environment. Ministry of Environment & Forests vide their OM J-11013/41/2006 –IA II(I) dated 13th May 2011 has affirmed this and exempted the Solar PV power plants from Environment Impact Assessment and Environmental Clearance requirement. The project participant has also got the host country approval from Ministry of environment and forest. This Point is closed 7. The validation team has conducted site visit on 27/08/2012, the project was in construction phase. The validation team also conducted interview with local stakeholders and confirms that the local villagers and contractor were involved during the construction.
--	--	---	---

VALIDATION REPORT



				This Query is Closed 8. The Grievances can raised directly to the DMPL staff or site engineers, the same is mentioned in the Roles and Responsibilities described in section B.7.3 of the PDD. This Query is Closed.
	Falguni Joshi	Gujarat forum on CDM respectfully submit the following comments on the Project Design Document (PDD) for 15 MW Solar PV Power Project by DMPL in Fatepur, Gujarat at village –Fatepur, Tal – Dasada, Dist – Surendranagar. 1. Similar projects, Similar PDD Two different projects by two different companies DMPL & MMPL are coming up for validation but after evaluating both the PDDs we like to put few points • Similar PDDs – just like copy-paste • Same Company Address & same contact person • Same language If two companies are related	1. The project activity is being implemented by Dreisatz MySolar24 (P) Ltd. that is a separate legal entity. There are no other project activities by this entity in the region. 2. Based on technical assessment of solar irradiation and other factors such as availability of land, policy and regulatory environment, rail and road connectivity, the project site was found to be suitable for implementation of the solar PV power project. 3. A separate local	1. The “Dreisatz MySolar24 (P) Ltd.” DMPL is the project participant to the project activity, which is a separate entity and the same has been verified with the certificate of incorporation submitted by the project participant signed by Registrar of Companies. This Query is Closed 2. The validation team has reviewed the Detail project report prepared by third party i.e. Arbutus Consultants Private Limited and hence based on technical assessment of solar irradiation and other factors such as availability of land, policy and regulatory environment, rail and road connectivity, the project site was found to be suitable for implementation of the solar PV power

	organization the project should be bundled. 2. Location selection Why this location has been chosen for this project? 3. Local stakeholder Consultation It seems that only one meeting was organized for both the project – way of inviting people were same, total number of people present were same and so on. 4. Misleading Information Description in section A.6 is misleading as same company has tried to register two different project of similar kind in same area. 5. Observation from grass-root As per representation made by villagers to our network member (ParyavaranMitra) and after the field visit by representative from ParyavaranMitra we like to write about some ground realities &#61656; The land acquired for project is fertile agricultural land – so what happen	stakeholder consultation was carried out for the project activity by DMPL. 4. There are no other project activities by DMPL in the region. 5. Only dry land has been acquired for the project, most of which was barren. This can be verified from the pre-project satellite images of the site. The land was purchased by DMPL on willing seller – willing buyer process directly from the owners. Suitable commensuration was paid to all land owners and no grievances have been reported by stakeholders on land transaction and compensation. This can also be verified from an Environmental Social and Impact Assessment study conducted by a third party, Senes Consultants India Pvt. Ltd. 6. There were no trees cut	project. This Point is closed 3. The project participant has conducted the global stakeholder consultation on 26/04/2012 and the local villagers were invited on 12/04/2012 through personal Invitation. The validation team has verified the same with the invitation letter, minutes of meeting of local stakeholder consultation and interview with the local stakeholder conducted during site visit on 27/08/2012. This query is Closed 4. The project activity is being implemented by Dreisatz MySolar24 (P) Ltd. There are no other project activities by the same entity in the same region. The validation team has verified the same with UNFCCC website and site visit. This Query is Closed. 5. The project participant has purchased the dry land for the proposed project activity, the same is verified by the ESIA (Environmental Social and
--	--	--	---



VALIDATION REPORT

	when farmers lose their land – there is threat on their livelihood. More tahn 3000 trees are there on ground, which already contribute positively to environment in terms of maintaining carbon standards. On one hand cutting trees and on other hand establishing solar power plant – looks contradictory! For local stakeholder consultation – villagers told that they didn't get any invitation letter for consultation. Less than 23 people were present in the meeting as per the information given by villagers. Procedure of meeting was going on only for 15 minutes.	down during the construction of the project activity. The land for the project activity is mostly barren with only some shrubs, bushes and a few trees. This can be verified from the pre-project satellite images as well as the Environmental Social and Impact Assessment study conducted by a third party, Senes Consultants India Pvt. Ltd. 7. The villagers and representatives of Fatepur village along with the employees of DMPL were considered to be the important stakeholders in the project activity. The same were invited through personal invitation letters and their concerns were addressed during the meeting. The meeting was attended by prominent people from the village including the	Impact Assessment) carried out by the third party i.e. Senes Consultants India Pvt. Ltd.. The private land was purchased with appropriate commensuration paid to the land owners and also there will be employment generation for the local villagers, the same was confirmed with the interview conducted during site visit. This Query is Closed 6. The validation team confirms that there were no trees and no sign of cutting trees at the project site was observed during site visit on 27/08/2012. Further on the basis of the ESIA (Environmental Social and Impact Assessment) carried out by the third party i.e. Senes Consultants India Pvt. Ltd and host country Approval given by Ministry of Environment and Forests, dated 06/11/2012 This Query is Closed 7. The project participant has conducted the global stakeholder consultation on 26/04/2012 and the local villagers were
--	--	---	--

VALIDATION REPORT



			Sarpanch and Head Master of Primary School, Fatepur. The meeting went on for about 40 minutes till all concerns of the stakeholders had been addressed.	invited on 12/04/2012 through personal Invitation. The validation team has verified the same with the invitation letter, minutes of meeting of local stakeholder consultation and interview with the local stakeholder conducted during site visit on 27/08/2012. This query is Closed
5	paryavaranmitra	As per representation made by villagers to ParyavaranMitra and after the field visit by representative from ParyavaranMitra we like to write about some ground realities &#61656; The land acquired for project is fertile agricultural land – so what happen when farmers lose their land – there is threat on their livelihood. &#61656; More tahn 3000 trees are there on ground, which already contribute positively to environment in terms of maintaining carbon standards. On one hand cutting trees and on other hand establishing solar power plant – looks contradictory! &#61656; For local	1. Only dry land has been acquired for the project, most of which was barren. This can be verified from the pre-project satellite images of the site. The land was purchased by DMPL on willing seller – willing buyer process directly from the owners. Suitable commensuration was paid to all land owners and no grievances have been reported by stakeholders on land transaction and compensation. This can also be verified from an Environmental Social and Impact Assessment study conducted by a third	1. The project participant has purchased the dry land for the proposed project activity, the same is verified by the ESIA (Environmental Social and Impact Assessment) carried out by the third party i.e. Senes Consultants India Pvt. Ltd. The private land was purchased with appropriate commensuration paid to the land owners and also there will be employment generation for the local villagers, the same was confirmed with the interview conducted during site visit. This Query is Closed 2. The validation team confirms that there were no trees and/or no sign of cutting trees at the project site was observed during site visit on 27/08/2012.



 VALIDATION REPORT

		stakeholder consultation – villagers told that they didn't get any invitation letter for consultation. Less than 23 people were present in the meeting as per the information given by villagers. Procedure of meeting was going on only for 15 minutes	party, Senes Consultants India Pvt. Ltd. 2. There were no trees cut down during the construction of the project activity. The land for the project activity is mostly barren with only some shrubs, bushes and a few trees. This can be verified from the pre-project satellite images as well as the Environmental Social and Impact Assessment study conducted by a third party, Senes Consultants India Pvt. Ltd. 3. The villagers and representatives of Fatepur village along with the employees of DMPL were considered to be the important stakeholders in the project activity. The same were invited through personal invitation letters and their concerns were addressed during the meeting. The meeting	Further on the basis of the ESIA (Environmental Social and Impact Assessment) carried out by the third party i.e. Senes Consultants India Pvt. Ltd and host country Approval given by Ministry of Environment and Forests, dated 06/11/2012 This Query is Closed 3. The project participant has conducted the global stakeholder consultation on 26/04/2012 and the local villagers were invited on 12/04/2012 through personal Invitation. The validation team has verified the same with the invitation letter, minutes of meeting of local stakeholder consultation and interview with the local stakeholder conducted during site visit on 27/08/2012. This query is Closed
--	--	--	--	---



VALIDATION REPORT

			was attended by prominent people from the village including the Sarpanch and Head Master of Primary School, Fatepur. The meeting went on for about 40 minutes till all concerns of the stakeholders had been addressed.	
--	--	--	---	--