



Validation report form for CDM project activities

(Version 02.0)

VALIDATION REPORT

Title of the project activity	Bundled Solar Power Project by EKI Energy Services Limited (EKIESL-CDM.July-14-01)
Version number of the validation report	02.0
Completion date of the validation report	27/07/2017
Version number of PDD to which this report applies	05
Date when PDD was uploaded for global stakeholder consultation	16/09/2014
Project participant(s)	ReXchange Global Solutions (P75)
Host Party	India
Estimated annual average GHG emission reductions or net removals in the crediting period (tCO₂e)	22,909 tCO ₂ e
Sectoral scope(s) and selected methodology(ies)	Sectoral Scope 01, "Grid connected renewable electricity generation", AMS I.D. (Version 18.0)
Name of DOE	GHD Limited
Name, position and signature of the approver of the validation report	Brent Boss, P. Eng., Peer Reviewer and Technical Expert

SECTION A. Executive summary

The proposed project activity involves the installation of 13.5 megawatt-peak (MWp) solar power project in the states of Madhya Pradesh and Karnataka in India. The proposed project activity will use technology consisting photovoltaic (PV) modules. The GHD project team checked and confirmed the technical project details through a review of the details available from the manufacturers (2nd party) of the solar panels. The GHD project team also checked the respective commissioning certificates of the individual bundle partners and confirmed that the capacity mentioned in the PDD is correct and accurate. Hence, the total capacity of the project activity is accurate.

ReXchange Global Solutions (P75) is the Project Participant (PP) and the coordinating/managing entity (CME). EKI Energy Services Limited is the consultant for the individual investors.

The project activity will generate electrical energy utilizing solar energy. The project is a bundled project activity and the details are as follows:

No.	Project owner	Capacity	Output Usage	Connected grid	State
1	Birla Corporation Limited	1.5MW	Captive usage	NEWNE	Madhya Pradesh
2	Porwal Auto Components Ltd.	1.5MW	Captive usage	NEWNE	Madhya Pradesh
3	Bidar Solar Power Pvt. Ltd	10 MW	Third party sale	Southern	Karnataka
4	Gupta Sons	0.5 MW	Third party sale	NEWNE	Madhya Pradesh
TOTAL CAPACITY= 13.5MWp					

The proposed Project Activity will result in reductions of greenhouse gas (GHG) emissions that are real, measurable and give long-term benefits to the mitigation of climate change.

Validation Scope: GHD Limited (GHD) completed the validation pursuant to the relevant requirements under the United Nations Framework Convention on Climate Change (UNFCCC) Clean Development Mechanism (CDM). As detailed in Paragraph 18 of the UNFCCC CDM Validation and Verification Standard (VVS) Version 9.0, the objective of validation is to ensure a thorough and independent assessment of proposed CDM project activities against applicable CDM requirements. Further, the purpose of validation is to have an independent third party assess the Project Activity on the basis of the CDM Project Design Document (PDD) in accordance with Paragraph 35 of the CDM Modalities and Procedures, as defined in Article 12 of the Kyoto Protocol, Decision 3/CMP.1, dated 30 March 2006 (CDM M&P)¹.

In the validation of this CDM Project Activity, GHD used a risk-based validation approach to focus and determine the detailed scope of the validation. The CDM is a rules-based mechanism, and GHD has ensured that in accordance with the Executive Board (EB), VVS, and the CDM M&P, the rules are complied with for project activities requesting registration as a proposed CDM Project Activity.

¹ 35. Validation is the process of independent evaluation of a Project Activity by a designated operational entity against the requirements of the CDM as set out in decision 17/CP.7, the present annex and relevant decisions of the COP/MOP, on the basis of the project design document.

The key risks associated with the project design, baseline, monitoring plan, emission reduction estimates, environmental impacts, and comments by local stakeholders are elements that are critical for meeting UNFCCC criteria for achieving real, measureable, long-term, and additional GHG emission reductions.

Validation Process:

GHD, as an independent third party is a Designated Operational Entity (DOE) recognized by the UNFCCC, is responsible for an objective review of the PDD and any supporting documentation. Validation is a requirement for all CDM projects and is necessary to provide assurance to stakeholders of the quality of the project and its intended generation of certified emission reductions (CERs).

As part of the validation process, GHD reviewed the completeness, conservativeness, and accuracy of the underlying evidence for the assumptions and claims made, and data sources used. The project's baseline, monitoring plan, and 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 meet the stated requirements and identified criteria. The results of this investigation, together with the results of the review of third party information as necessary, give the required input for a validation opinion. A validation opinion may be positive or negative. Irrespective of the Validation Opinion, the Validation Report will be sent to the CDM Executive Board.

As an independent third party DOE, GHD is responsible for reviewing the PDD and any supporting documentation to ensure that the requirements of Paragraph 37 of the CDM M&P are met, specifically that:

- (a) *The participation requirements as set out in Paragraphs 28 to 30 [of the CDM M&P²] are satisfied*
- (b) *Comments by local stakeholders have been invited, a summary of the comments received has been provided, and a report to the designated operational entity on how due account was taken of any comments has been received*
- (c) *Project participants have submitted to the designated operational entity documentation on the analysis of the environmental impacts of the project activity, including trans-boundary impacts and, if those impacts are considered significant by the project participants or the host Party, have undertaken an environmental impact assessment in accordance with procedures as required by the host Party*
- (d) *The project activity is expected to result in a reduction in anthropogenic emissions by sources of greenhouse gases that are additional to any that would occur in the absence of the proposed project activity, in accordance with Paragraphs 43 to 52 [of the CDM M&P]*
- (e) *The baseline and monitoring methodologies comply with requirements pertaining to:*
 - (i) *Methodologies previously approved by the Executive Board*
 - (ii) *Modalities and procedures for establishing a new methodology, as set out in Paragraph 38 [of the CDM M&P]*

² Paragraphs 28 to 30 of the CDM M&P are as follows:

28. Participation in a CDM Project Activity is voluntary.

29. Parties participating in the CDM shall designate a national authority for the CDM.

30. A Party not included in Annex I may participate in a CDM Project Activity if it is a Party to the Kyoto Protocol.

- (f) *Provisions for monitoring, verification and reporting are in accordance with decision 17/CP.7, the present annex and relevant decisions of the COP/MOP*
- (g) *The project activity conforms to all other requirements for CDM project activities in decision 17/CP.7, the present annex and relevant decisions by the COP/MOP and the Executive Board*

The validation of baseline studies and monitoring plans for the Project Activity included an assessment of the following, as applicable to the Project Activity:

- Accuracy of baseline emissions
- Uncertainty of external data sources used
- Coverage of leakage in the baseline scenario
- Baseline emission assumptions
- Accuracy of emission calculations in the monitoring plan

The PDD supplied by the Project Participant was used as the primary basis for the validation of the proposed CDM Project Activity. The GHD Project Team assessed the PDD for completeness and to determine if it was comprehensive enough to provide an accurate picture of the proposed Project Activity and the baseline. The documentation was approved by the Project Participant for its completeness before it was presented to the GHD Project Team for validation.

The document review established to what degree the presented PDD, including the baseline study and the monitoring plan, met the established validation criteria.

The GHD Project Team's document review during the validation process comprised, but was not limited to, an evaluation of the following:

- The management system described in the PDD is complete and appropriate
- The geographical boundaries, including all national and/or sectoral policies, of the Project Activity are appropriate
- Confirmation regarding voluntary action by the entity
- Receipt of Letter(s) of Approval
- The CDM start date of Project Activity is appropriate
- The length of the Project Activity crediting period is appropriate
- An environmental analysis of Project Activity impacts, as applicable, is complete and appropriate
- The documentation is complete and comprehensive and follows the structure and criteria given in the CDM templates
- The application of baseline and monitoring methodologies are justified and appropriate. The assumptions for the baseline are conservative and appropriate
- The description of the baseline development has considered technological, political, socio-demographic, environmental, and legal trends of relevance to the project
- Additionality of the Project Activity is sufficiently demonstrated in the PDD

- The eligibility criteria in the PDD have been met by the CDM Project Activity
- All aspects related to direct and indirect emissions, including leakage, are captured, if applicable in the PDD
- The calculation of GHG emission reductions is appropriate and uses conservative assumptions for estimating emission reductions
- Local stakeholder consultation has been carried out and comments are taken into account in the Project Activity design
- The technical features of the CDM Project Activity, as well as other information about the Project Activity, have been sufficiently addressed
- The monitoring plan clearly identifies the frequency of, and responsibility and authority for, monitoring, measurement and data recording activities, and sufficiently describes quality control/quality assurance/management control procedures

The validation process is not meant to provide any form of consulting for the Project Participant. However, stated requests for clarifications, corrective actions, and forward actions may have provided input for improvement of the project design.

The main components of GHD's validation process were as follows:

- Document Review
- Posting of the PDD for the global stakeholder commenting period
- Completion of a Site Visit
- Validation Assessment and Issuance of Corrective Action/Clarification Requests
- Response to Corrective Action/Clarification Requests
- Draft Validation Report Issuance
- Technical Review and formulation of Validation Opinion
- Final Validation Report Issuance
- Submission of PDD, relevant additional documents, and Request for Registration with CDM EB

GHD used the above components of the validation process to assess the eligibility criteria in the PDD.

Conclusion & Validation opinion:

The GHD Project Team has reviewed the proposed Project Activity against the requirements of the latest version of the PDD and confirms that the PDD met the identified requirements as set out in Paragraphs 37 [of the CDM M&P].

Validation Opinion:

The validation was performed in accordance with the UNFCCC criteria for the CDM, Validation and Verification Standard (Version 09.0), relevant decisions from the COP/MOP and/or the CDM Executive Board, and host country criteria.

Through installation of a grid/captive usage connected 13.5 MWp solar power project in the state of Madhya Pradesh and Karnataka in India, the proposed Project Activity will result in a reduction of greenhouse gas emissions that are real, measurable, contribute to sustainable development, and will result in long-term benefits to the mitigation of climate change.

Upon completion of the validation process it is GHD's opinion that all relevant CDM and host country criteria have been satisfied. The PDD properly applies the criteria of AMS.I.D Version 18.0. Within the PDD, it was demonstrated and confirmed by the GHD Project Team that proposed Project Activity is not a likely baseline scenario. Therefore, it is GHD's opinion that the emission reductions attributable to the project are additional to any emission reductions that would occur in the absence of the Project Activity.

All CARs and CLs raised by the GHD Project Team have been satisfactorily resolved by the Project Participant.

In total, the emission reductions from the Project Activity are estimated to be 160,363 tonnes of CO₂e over a 7-year crediting period, resulting in an average of 22,909 tonnes of CO₂e annually throughout the crediting period. The estimated emission reductions have been reviewed by the GHD Project Team for completeness, accuracy, and consistency. At the conclusion of this review, GHD deemed it reasonable that the stated quantity of emission reductions may be achieved should the related assumptions and operational conditions remain unchanged.

Based on the validation assessment performed, GHD is issuing a positive Validation Opinion in regards to Project Activity and therefore recommends the Project Activity for registration with the UNFCCC.

SECTION B. Validation team, technical reviewer and approver**B.1. Validation team member**

No.	Role	Type of resource	Last name	First name	Affiliation (e.g., name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk review	On-site inspection	Interview(s)	Validation findings
1	Team Leader and Technical Expert	EI	Das	Sukanta	External Individual	yes	yes	yes	yes
2	Team Member	IR	Chan	Valerie	GHD Limited	yes	no	no	yes

B.2. Technical reviewer and approver of the validation report

No.	Role	Type of resource	Last name	First name	Affiliation (e.g., name of central or other office of DOE or outsourced entity)
1.	Technical Reviewer and Technical Expert	IR	Boss	Brent	GHD Limited

SECTION C. Means of validation**C.1. Desk review**

Please refer to Appendix 3 for the list of documents reviewed or referenced by GHD during the validation process.

On 14 and 15 November 2014, the GHD project team visited the states of Madhya Pradesh and Karnataka, accompanied by a representative of EKI. All the sites in the states of Madhya Pradesh and Karnataka were visited by the GHD project team. The documents reviewed on-site are summarized in Appendix 3.

The GHD project team checked the implementation of the project, baseline emissions, emission reduction calculations, and monitoring. The monitoring practices of the Sites are completed in accordance with the PDD. The emission reduction calculations were determined in accordance with the approved methodology.

The GHD project team confirmed during the validation site visits that the PDD technical description was correct and no discrepancies were identified.

C.2. On-site inspection

Duration of on-site inspection: 14/11/2014 and 15/11/2014				
No.	Activity performed on-site	Site location	Date	Team member
1.	Assessment team checked the implementation of the project, Baseline emission, Emission reduction calculation, technical description of the project and Monitoring.	The project is located in the states of Madhya Pradesh and Karnataka	14/11/2014 and 15/11/2014	Mr. Sukanta Das

C.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Singhvi	Sumeet	GM-EKI service private Limited	14 and 15 November 2014	Implementation of the project, monitoring and emission reduction calculations	Mr. Sukanta Das

C.4. Sampling approach

The GHD Project Team completed sampling to a reasonable level of assurance and sampled all available data for the project during the site visit and document review.

C.5. Clarification requests, corrective action requests and forward action requests raised

Area of validation findings	No. of CLs	No. of CARs	No. of FARs
Global stakeholder consultation	0	0	0
Approval	0	1	0
Authorization	0	0	0
Contribution to sustainable development	0	0	0
Modalities of communication	0	1	0
Project design document	0	1	0
Description of project activity	0	0	0
Application of selected baseline and monitoring methodology and selected standardized baseline			
- Applicability of methodology and standardized baseline	0	1	0
- Deviation from methodology	0	0	0
- Clarification on applicability of methodology, tool and/or standardized baseline	0	0	0
- Project boundary	0	0	0
- Establishment and description of baseline scenario	0	0	0
- Demonstration of additionality	0	1	0
- Emission reductions	0	2	0
- Monitoring plan	0	1	0
Duration and crediting period	0	0	0
Environmental impacts	0	0	0
Local stakeholder consultation	0	1	0
Others (please specify)	1	2	0
Total	1	11	0

SECTION D. Validation findings**D.1. Global stakeholder consultation**

Means of validation	The GHD Project Team made the PDD publicly available through the dedicated interface on the UNFCCC CDM website for the Global Stakeholder Consultation, which lasted for a period of 30 days from 17 September 2014 to 16 October 2014.
Findings	Not Applicable
Conclusion	No comments were received during the Global Stakeholder Consultation period.

D.2. Approval

Means of validation	<p>Paragraph 43 of the VVS Version 09.0 requires that the DOE determine "whether the designated national authority (DNA) of each Party indicated as being involved in the proposed CDM project activity of PoA in the PDD or PoA-DD has provided a written letter of approval" (LoA).</p> <p>The GHD Project Team reviewed the LoA issued by the Indian DNA (Ministry of Environment and Forest, Government of India), dated 16/11/2015, to determine whether the letter confirms that:</p> <ul style="list-style-type: none"> (a) The Party is a Party to the Kyoto Protocol; (b) Participation is voluntary; (c) In the case of the host Party, the proposed CDM project activity contributes to the sustainable development of the country; (d) It refers to the precise title of the proposed CDM project activity in the PDD being submitted for registration (i.e., no difference shall be found between the title in the letter and that in the PDD).
Findings	During the validation process, the GHD Project Team raised a CAR regarding receipt of a LoA in accordance with the VVS requirement. The detail of CAR 1 is provided in Appendix 4.

Conclusion	<p>The GHD Project Team checked the LoA dated 16/11/2015, which was provided by the Project Participant, and confirmed the following:</p> <ul style="list-style-type: none"> (a) The Government of India has ratified the Kyoto Protocol in August 2002 and hence is a Party to the Kyoto Protocol. (b) Participation in the proposed CDM Project Activity is voluntary. (c) The project contributes to Sustainable Development in India. (d) The LoA refers to the precise title of the proposed CDM Project Activity - "Bundled Solar Power Project by EKI Energy Services Limited (EKIESL-CDM.July-14-01)" – mentioned in the PDD being submitted for registration. <p>The GHD Project Team also confirmed the following with respect to the LoA:</p> <ul style="list-style-type: none"> i) Was unconditional with respect to the above list. ii) Indicates that a proposed bundled small-scale CDM project activity has only one host party, in which the project activity is located, as set out in the PDD. iii) Was issued by the respective Party's DNA and is valid for the proposed CDM project activity. <p>In conclusion, the GHD assessment team reviewed the LoA dated 16 November 2015, which was received from the project participants, and confirmed the letter satisfies the requirements of CDM VVS Version 09.0 paragraphs 43 to 48.</p>
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D.3. Authorization

Means of validation	Paragraph 51 of the VVS Version 09.0 requires that the DOE determine whether each Project Participant has been authorized by at least one Party involved in the letter of approval.
Findings	During the validation process, the GHD project team raised CAR 1 regarding authorization. The detail of the CAR is presented in Appendix 4.
Conclusion	<p>The GHD project team reviewed the LoA dated 16/11/2015, and confirmed the letter satisfies the requirements of CDM VVS Version 09.0 Paragraph 51. The GHD project team followed paragraphs 53-56 of VVS Version 09.0 for validation confirmation regarding Authorization of LoA.</p> <p>The Project Participant submitted the LoA issued by the Indian DNA "The Ministry of Environment, Forest, and Climate Change", bearing letter number 4/3/2015-CCC, dated 16/11/2015. The name of the project activity and project participant in the LoA was verified against the information on Page 01 under Section A.1 and Section A.4 of the PDD and found to be consistent, and hence was accepted.</p>

D.4. Contribution to sustainable development

Means of validation	Paragraph 57 of the VVS, Version 09.0 requires that the DOE "confirm that the DNA has considered whether the proposed CDM project activity assists the host Party in achieving sustainable development."
Findings	During the validation process, the GHD project team raised CAR 1 regarding sustainable development and the detail of the CAR closure is provided in Appendix 4.
Conclusion	<p>The GHD project team reviewed the LoA dated 16/11/2015, and confirmed the letter satisfies the requirements of CDM VVS Version 09.0 Paragraph 57. The GHD project team followed paragraph 58 of VVS Version 09.0 for validation confirmation regarding Sustainable Development.</p> <p>In accordance with Paragraph 58 of the VVS Version 09.0, the GHD Project Team reviewed and verified that the LoA issued by the DNA for India confirms that the proposed CDM Project Activity contributes to the sustainable development of India.</p> <p>The project activity is in line with sustainable development policies of the country and national regulation / policy on Environmental Protection, Electricity and Non-Conventional Energy. Nevertheless, the LoA states that the project participant (PP) has to comply with the following conditions:</p>

	<ul style="list-style-type: none"> • PP shall not sell the CERs to any agency /company/ organization which purchases the CERs using ODA Funds • PP shall inform the national CDM Authority regarding all transaction details of CERs including the name and address of the party to which CERs were sold within 30 days of transfer of the CERs • PP shall furnish expeditiously any information, during the lifetime of the project as requested by the National CDM Authority. • PP shall obtain all statutory clearances and other approvals as required from the competent authorities for setting up of the project • All transaction shall be subject to supervision of the Executive Board of the CDM, under the authority and guidance of the COP/MOP • This approval is not transferable. The authority reserved the rights to revoke this Host Country Approval if the conditions stipulated in this approval are not complied with to the satisfaction of the National CDM Authority. <p>All the above conditions are met and same is checked by the GHD assessment team from the host country approval and found to be correct.</p>
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D.5. Modalities of communication

Means of validation	<p>Paragraph 60 of VVS Version 09.0 requires:</p> <p><i>The DOE shall validate the corporate identity of all project participants, the coordinating/managing entity 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</i></p>
Findings	During the validation process, the GHD project team raised CAR 2 regarding the MoC. The detail of the CAR closure is provided in Appendix 4.
Conclusion	As required by Paragraph 60 of the VVS Version 09.0, the Project Participant provided the MoC, dated 10/01/2015, to the GHD Project Team. The representative for the Project Participant, designated in Appendix 1 of the PDD corresponds to the authorized signatory in the MoC statement. The GHD Project Team confirmed that the address for the signatory in the F-CDM-MOC matched the address referred to in the Letter of Approval.

D.6. Project design document

Means of validation	Paragraph 69 of VVS Version 09.0 requires that the DOE whether the PDD was completed using the valid version of the PDD form appropriate to the type of the proposed CDM project activity.
Findings	During the validation process, the GHD project team raised CAR 3 regarding PDD form filling. The detail of the CAR closure is provided in Appendix 4.
Conclusion	The Project Participant has used the Project Design Document Form for small-scale CDM Project Activities (CDM-SSC-PDD-Form) Version 08.0, and has followed the "Instruction for filling out the project design document form for small-scale CDM project activities" as part of the CDM-SSC-PDD-Form. The form is the latest available version at the time of completion of the validation report.

D.7. Description of project activity

Means of validation	Paragraph 71 of VVS Version 09.0 requires the DOE to determine "whether the description of the proposed CDM project activity in the PDD or PoA and CPA in the PoA-DD and CPA-DD is accurate, complete, and provides an understanding of the proposed CDM project activity or PoA and CPA."
Findings	No findings are raised related to the project activity.
Conclusion	As per the requirement of VVS Version 09.0 Paragraph 72, GHD completed document reviews, and completed site visits on 14 and 15 November 2014, and confirmed that the proposed bundled small-scale project activity involves the installation of 13.5 MWp solar power project in the states of Madhya Pradesh and

Karnataka in India. The proposed project activity will use technology consisting photovoltaic (PV) modules.

The project activity will generate electrical energy utilising solar energy. The project is a bundled project activity and the details of the same are as follows:

S. No.	Project owner	Capacity	Output Usage	Connected grid	State
1	Birla Corporation Limited	1.5 MW	Captive usage	NEWNE	Madhya Pradesh
2	Porwal Auto Components Ltd.	1.5 MW	Captive usage	NEWNE	Madhya Pradesh
3	Bidar Solar Power Pvt. Ltd	10 MW	Third party Sale	Southern	Karnataka
4	Gupta Sons	0.5 MW	Third party Sale	NEWNE	Madhya Pradesh
TOTAL CAPACITY= 13.5 MWp					

The bundling/co-ordinating entity is ReXchange Global Solutions (P75) while EKI Energy Services Limited is acting as the consultant for the individual investors. As it is a green field project, scenario existing prior to the start of the project activity, baseline scenario, would be electricity generation by the NEWNE/Southern grid connected power plants. Therefore, in the absence of the project activity, the equivalent amount of electricity would have been generated by the grid connected / new power plants in the NEWNE/Southern grid, which are/will be predominantly based on fossil fuels.

The technical details were checked by the assessment team from the details available from the manufacturers (2nd party) of the Solar Panels.

Project activity is of combined capacity of 13.5 MWp. As per the glossary of CDM terms Version 07 the capacity of the project is below 15 MW type I small scale project activity and thus acceptable to the assessment team. The technology being employed is well proven, safe & sound. No technology transfer to host party is there due to project activity. The project activity will remain in the cap of type I project activity throughout the crediting period.

The GHD assessment team also checked the power purchase agreement signed to cross check the combined capacity.

As per the provisions prescribed in "Clean development mechanism project standard" and further referring to the methodological tool "Assessment of debundling for small-scale project activities (Version 04.0)":

A proposed small-scale project activity shall be deemed to be a debundled component of large project activity if there is a registered small-scale CDM project activity or an application to register another small-scale CDM project activity:

- *With the same project participants;*
- *In the same project category and technology; and*
- *Registered within the previous two years; and*
- *Whose project boundary is within 1 km of the project boundary of the proposed small scale activity*

The GHD project team confirmed that PP have not registered any small scale CDM activity or applied to register another small scale CDM project activity within 1 km of the project boundary, in the same project category and technology/measure in previous 2 years, by checking the UNFCCC web site, and searching for project activities with the same location in and around the project activity. The GHD project team noted that the Bundled Solar Power Project by EKI Energy Services Limited (EKIESL-CDM.June-13-02) (UNFCCC CDM Project 10071) includes Gupta Sons as a project investor for a 1.25 MW solar photovoltaic power plant (i.e., within 1 km of the project boundary of the proposed

	<p>small-scale activity). The GHD project team verified that the Gupta Sons 0.5 MW and 1.25 MW solar power projects for the proposed small-scale project activity and UNFCCC Project 10071, respectively, were separate projects based on a review of the website http://www.stardeltatransformers.com/star_delta_solar.php which notes that Gupta Sons (GSONS) has two projects commissioned on 27 March 2012 and 28 March 2012, respectively.</p> <p>The GHD project team also confirmed that the proposed CDM project activity is not a CPA that has been excluded from a registered CDM PoA as a result of erroneous inclusions of CPA. The GHD project team checked the UNFCCC website and confirmed that the project participant is not involved in any PoA registration during the validation of this project activity. Hence exclusion of CPA from registered CDM PoA is ruled out.</p> <p>This means that the project activity does not fall under the de-bundled category and qualifies for small scale CDM Project.</p>
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D.8. Application of selected baseline and monitoring methodology and selected standardized baseline

D.8.1. Applicability of methodology and standardized baseline

Means of validation	Paragraph 78 of VVS Version 09.0 requires <i>The DOE shall determine whether the baseline and monitoring methodologies and, where applicable, the standardized baseline selected by the project participants or the coordinating/managing entity are the valid versions of those approved by the Board.</i>	
Findings	The PDD was initially prepared in accordance with the methodology AMS-I.D (Version 17), which was valid from 17 June 2011 to 27 November 2014. Requests for registration under AMS-I.D. (Version 17.0) were allowed until 25 July 2015. Due to the delays with the Letter of Approval from the Host Country, the request for registration cannot proceed under AMS-I.D. Version 17.0. PDD Version 03 was prepared in accordance methodology AMS-I.D Version 18, valid from 28 November 2014 onwards. During the validation process GHD project team raised CAR 04 and CAR 10. The details of the closure of the CARs are presented in Appendix 4. Applicability criteria as per the requirement of AMS.I.D Version 18 is described below:	
	Applicability Criteria (AMS-I.D. Version 18.0)	Project Eligibility (DOE Remark)
	This methodology is applicable to project activities that: a) Install a Greenfield plant; b) Involve a capacity addition in (an) existing plant(s); c) Involve a retrofit of (an) existing plant(s); d) Involve a rehabilitation of (an) existing plant(s)/unit(s); or e) Involve a replacement of (an) existing plant(s)	The project involved installation of new solar-based electricity generation plants (installation of a Greenfield plant), not additions to an existing system). Therefore, the AMS-I.D methodology is applicable to the project activity under category a). The GHD project team checked and confirmed this arrangement during the validation site visit.
	Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology: a) The project activity is implemented in an existing	The project is solar power project and thus the criterion is not applicable to this project activity. The GHD project team completed a site visit and document reviews, and confirmed that the project is a solar

	<p>reservoir with no change in the volume of reservoir.</p> <p>b) 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.</p> <p>c) 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.</p>	<p>power project and this applicability criterion does not apply.</p>
	<p>If the new unit has both renewable and non-renewable components (e.g., a wind/diesel unit), the eligibility 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.</p>	<p>The project activity is a 13.5 MW solar electricity generation, no co-firing of co-fire fossil fuels occurs.</p> <p>The GHD project team completed a site visit and document reviews, and confirmed that the project is a solar power project with no co-firing facility; therefore, this applicability criterion does not apply.</p>
	<p>Combined heat and power (co-generation) systems are not eligible under this category.</p>	<p>The Project activity is a renewable solar energy project based on PV technology and is not a combined heat and power system.</p> <p>The GHD project team completed a site visit and document reviews, and confirmed that the project is solar power project with no combined heat and power / cogeneration system; therefore, the solar power project activity is eligible.</p>
	<p>In the case of project activities that involve the capacity 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.</p>	<p>The project activity is a Greenfield project and there was no existing power generation facility at the Site.</p> <p>The GHD project team completed a site visit and document reviews and confirmed that the project is a green field project, and this applicability criterion does not apply.</p>
	<p>In the case of retrofit, rehabilitation or replacement, to qualify as a small-scale project, the total output of the retrofitted, rehabilitated or replacement power plant/unit shall not exceed the limit of 15 MW.</p>	<p>The GHD project team completed a site visit and document reviews and confirmed that the solar project activity is a Greenfield project, and therefore, the applicability criterion does not apply.</p>
	<p>In the case of landfill gas, waste gas, wastewater treatment and agro-industries projects, recovered methane emissions are eligible under a relevant Type III category. If the recovered methane is used for electricity generation for supply to a</p>	<p>The GHD project team completed a site visit and document reviews and confirmed that the project activity is a solar project, and therefore, the applicability criterion does not apply.</p>

	grid then the baseline for the electricity component shall be in accordance with procedure prescribed under this methodology. If the recovered methane is used for heat generation or cogeneration other applicable Type-I methodologies such as "AMS-I.C.: Thermal energy production with or without electricity" shall be explored.	
	In case biomass is sourced from dedicated plantations, the applicability criteria in the tool "Project emissions from cultivation of biomass" shall apply.	GHD project team completed a site visit and document reviews and confirmed that the project activity is a renewable solar energy project that does not source biomass from dedicated plantations; therefore, the applicability criterion does not apply.
Conclusion	Through GHD's review of the PDD and the methodology referenced therein, and by checking the UNFCCC CDM website and completing document reviews and a site visit, GHD confirmed that the methodology selected by the Project Participant is the valid version approved by the EB and is applicable to the project activity.	

D.8.2. Deviation from methodology

Means of validation	Paragraph 87 of VVS Version 09.0 addresses deviations from methodology to justify regarding any deviation from the methodology.
Findings	No relevant findings were raised during the validation process.
Conclusion	The deviation of the methodology is not a requirement as the project activity fulfils the requirement of the applied methodology AMS.I.D Version 18.

D.8.3. Clarification on applicability of methodology, tool and/or standardized baseline

Means of validation	Paragraph 90 of VVS Version 09.0 allows DOEs to request clarification of methodology, tool, and/or the standard baseline when the DOE cannot make a determination regarding the applicability, requires clarifications on applicability of methodology, tools and/or Standardised baseline.
Findings	No relevant findings were raised during the validation process.
Conclusion	No clarification on applicability of methodology, tool and/or standardized baseline was required by the DOE.

D.8.4. Project boundary

Means of validation	Paragraph 91 of VVS Version 09.0 states: <i>The DOE shall determine whether all main GHG emission sources, the physical delineation of the proposed CDM project activity or PoA and CPA, and other relevant project and baseline emission sources covered in the selected methodology and, where applicable, the selected standardized baseline are included within the project boundary for the purpose of calculating project and baseline emissions for the proposed CDM project activity or CPA.</i>
Findings	No relevant findings were raised during the validation process.
Conclusion	The GHD Project Team reviewed the project location provided in the PDD, assessed the Site boundaries during the Site visits and questioned the developer of the proposed Project Activity facilities. In accordance with Paragraphs 92-94 of VVS Version 09.0, the GHD project team confirmed that the spatial extent of project boundary diagram referred by the

	methodology is correctly stated in the revised PDD Version 03 as per the applied methodology. The below table details the emission sources:		
		Sources	GHGs involved
	Baseline Emissions	Southern/NEWNE Grid	CO ₂
	Project Emissions	NA	NA
The GHD Project Team conducted Site Visits, completed document reviews, and confirmed that all main GHG emission sources, the physical delineation of the proposed project activity are included within the project boundary for the purpose of calculating project and baseline emissions in accordance with Paragraph 91 of the VVS Version 09.0.			

D.8.5. Establishment and description of baseline scenario

Means of validation	Paragraph 97 of VVS Version 09.0 states: <i>The DOE shall determine whether the baseline identified for the proposed CDM project activity or PoA and CPA is the scenario that reasonably represents the anthropogenic emissions by sources of GHGs that would occur in the absence of the project activity or PoA and CPA.</i>
Findings	No relevant findings were raised during the validation process.
Conclusion	The GHD project team confirmed that the proposed project activity is a grid connected solar energy generation project, and that the PP developed the project based on the approved methodology AMS I-D Ver. 18.0. As per the methodology "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." VVS Version 09.0 Paragraph 100 states, "where the baseline scenario is not prescribed in the approved methodology, the DOE shall assess the list of identified credible alternatives to the project activity in the PDD selected to determine the most realistic baseline scenario." As the applied small scale methodology clearly mentions the baseline scenario and the same scenario was applied for the proposed project activity, no further analysis on baseline identification was required.

D.8.6. Demonstration of additionality

Means of validation	Paragraph 108 of VVS Version 09.0 states "The DOE shall determine whether the proposed CDM project activity is additional as demonstrated in the PDD."
Findings	During the validation process, the GHD Project Team raised CAR 06. The details of CAR 06 are presented in Appendix 4.
Conclusion	The 'Methodological Tool "Demonstration of additionality of small-scale project activities" (Version 10.0) lists grid-connected and off-grid renewable electricity generation technologies that are automatically defined as additional, without further documentation of barriers. The list includes the following grid-connected renewable electricity generation technologies of installed capacity up to 15 MW: <ol style="list-style-type: none"> 1) Solar technologies (photovoltaic and solar thermal electricity generation); 2) Off-shore wind technologies; 3) Marine technologies (wave, tidal); 4) Building-integrated wind turbines or household rooftop wind turbines of a size up to 100 kW. Since the project activity is a solar photovoltaic electricity generation project of capacity 13.5 MWp, the project activity is automatically additional and does not require any further demonstration of barriers.

Annexure 3 of the EB 22 states that national and/or sectoral policies and circumstances have to be accounted for when considering the baseline scenario. Paragraph 7(a) states that, only those national and/or sectoral policies or regulations under paragraph 6(a) i.e., type E+ policy that increase GHG emissions, that have been implemented before adoption of the Kyoto Protocol by the COP (decision 1/CP.3, 11 December 1997), shall be taken into account when developing a baseline scenario. The Electricity Act of 2003 promoted cogeneration and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity (Refer Section 86(1) of Electricity Act 2003). Therefore, it could be seen that the provincial and sectoral policies are E- i.e., policies that decrease GHG emissions and are after November 2001. Hence the baseline scenario of electricity generation by grid connected fossil fuel dominated power plants is in accordance with Annex 3 of EB 22.

The baseline mentioned in Section D.8.5 above is in compliance with all the applicable regulatory policies and laws. Additionally, the Project Participant is under no compulsion to opt for any particular technology or even a renewable mode of power generation. There is no governmental body or EB policy which requires a particular kind of fuel to be chosen and there is no legal requirement to which the above alternative does not conform.

Prior CDM consideration:

The start date of the proposed project activity is 05 March 2012, therefore Paragraph 28 of CDM Project Standard Version 09.0 is applicable, and states that "For a proposed CDM project activity with a start date on or after 2 August 2008, project participants shall inform the host Party's designated national authority (DNA), if such DNA exists, and the secretariat of their intention to seek CDM status in accordance with the Project cycle procedure".

In accordance with this requirement, all project investors informed the UNFCCC and host party DNA i.e., National CDM Authority (NCDMA) of their intention to seek CDM status for the proposed project activity in a defined F-CDM form within 180 days of the start date (refer table below). Hence, it can be clearly established that CDM was seriously considered in the decision to proceed with the proposed project activity.

Project Investor	Purchase Order Date	Commissioning Date	Date of Notification to CDM EB/ NCDMA
Birla Corporation Limited	18-Oct-2012	23-Jul-2013	5-Mar-2013 ³
Porwal Auto Components Ltd.	19-Jan-2013	27-Dec-2013	3-Jul-2013 ⁴
Bidar Solar Power Pvt. Ltd	21-Oct-2013	28-Aug-2014	29-Mar-2014 ⁵
Gupta Sons	5-Mar-2012	26-Mar-2012	2-Feb-2012 ⁶

The GHD project team checked the UNFCCC acknowledgements via the Prior Consideration of the CDM search engine and concluded that the project

³ For solar project of Birla Corporation Ltd, the prior consideration notification was given with project title as "Solar Power Project by EKI Energy Services Limited (EKIESL-CDM.March-13-01)" on 05/03/2013.

⁴ For Solar project of Porwal Auto Components Ltd., the prior consideration notification was given with project title as "Solar Power Project by Porwal Auto Components Ltd (EKIESL-CDM.July -001-13)" on 03/07/2013.

⁵ For Solar project of Bidar Solar Power Pvt. Ltd, the prior consideration notification was given with project title as "Renewable energy power Project by EKI Energy Services Limited (EKIESL-CDM-29-March -2014)" on 29/03/2014.

⁶ For Solar project of Gupta and Sons, the prior consideration notification was given with project title as "Solar Power Project by M AND B Switchgears Limited" on 02/02/2012.

	information were provided accurately and thus the present project activity is in line with prior consideration guideline vide paragraph 115 of VVS Version 09. The details are provided below:		
	Project Investor	Date of Notification to CDM EB/NCDMA	Date of Acknowledgement from CDM EB/NCDMA
	Birla Corporation Limited	5-Mar-2013	5-Mar-2013
	Porwal Auto Components Ltd.	3-Jul-2013	3-Jul-2013
	Bidar Solar Power Pvt. Ltd	29-Mar-2014	31-Mar-2014
	Gupta Sons	2-Feb-2012	2-Feb-2012
<p>Moreover, the GHD project team noted that paragraph 12 of the Project Cycle Procedure (PCP) Version 9.0 requires project participants to inform the secretariat of the progress of the project activity every two years after the initial notification, unless webhosting for global stakeholder consultation (GSC) has taken place within two years of the initial notification of the prior consideration of the CDM. The PDD was published on 16 September 2014. The GHD project team noted that for the Gupta Sons project investor, a second notification was mandatory. A second notification for the project activity was provided to UNFCCC, dated 24 April 2017. Although more than two years has lapsed between prior consideration notices, a negative validation opinion is not required based on footnote 18 to Paragraph 170(b) of the CDM VVS Version 09.0. The GHD project team also checked the UNFCCC acknowledgement via the Prior Consideration of the CDM search engine at the following link:</p> <p>https://cdm.unfccc.int/Projects/PriorCDM/notifications/index.html</p> <p>Thus, GHD project team verified that the requirement vides Para 12 of PCP and footnote 18 of VVS Version 09 is fulfilled.</p>			

D.8.7. Emission reductions

Means of validation	<p>Paragraph 140 of VVS Version 09.0 states:</p> <p><i>The DOE shall determine whether the steps taken and the equations and parameters applied in the PDD or PoA-DD and CPA-DD to calculate project emissions, baseline emissions, leakage and emission reductions comply with the requirements of the selected methodology including applicable tool(s) and, where applicable, the selected standardized baseline and the "Standard for sampling and surveys for CDM project activities and programme of activities".</i></p>
Findings	<p>During the validation process, the GHD Project Team raised CARs 05 and 07. The details of the CARs are presented in Appendix 4.</p>
Conclusion	<p>In accordance with Paragraph 141, the GHD project team confirmed that the baseline emissions include emissions that would have occurred in the absence of the project activity. The emission reduction calculation has been done in accordance with approved methodology AMS-I.D. Version 18.0.</p> $ER_y = BE_y - PE_y - LE_y$ <p>Where,</p> <p>BE_y = Baseline emissions in the year y in tCO₂e</p> <p>PE_y = Project emissions in the year y.</p> <p>LE_y = Emissions due to leakage in the year y.</p> <p>The data sources and assumptions used to determine emission reductions are appropriate and calculations are correct. The GHD Project Team ensured and confirmed through a review of the PDD and the associated methodology and tools that:</p>

	<ul style="list-style-type: none"> The assumptions and data used by the Project Participants are listed in the PDD, including their references and sources The documentation used by the Project Participants as the basis for assumptions and sources of data is correctly quoted and interpreted in the PDD The values used in the PDD are considered reasonable in the context of the proposed Project Activity The baseline methodology AMS-I.D Version 18.0 has been applied correctly to calculate project emissions, baseline emissions, leakage, and emission reductions as required The estimates of the baseline emissions can be replicated using the data and parameter values provided in the PDD
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D.8.8. Monitoring plan

Means of validation	<p>Paragraph 148 of VVS Version 09.0 states</p> <p><i>The DOE shall determine whether the description of the monitoring plan included in the PDD or PoA-DD and CPA-DD complies with the approved monitoring methodology including applicable tool(s) and, where applicable, the approved standardized baseline and, where applicable, the "Standard for sampling and surveys for CDM project activities and programme of activities"</i></p>								
Findings	<p>During the validation process, the GHD Project Team raised CAR 08. The CAR is presented in Appendix 4.</p>								
Conclusion	<p>In accordance with Paragraph 149 of VVS Version 09.0, the GHD project team confirmed that the monitoring plan and parameters of the PDD followed the approved monitoring methodology AMS.I.D Version 18 which is the latest version available.</p> <p><u>Parameters determined ex-ante:</u></p> <p>Baseline emission factor of NEWNE/Southern Grid is establish ex-ante based on Tool to calculate the grid emission factor, using a combined approach consisting 75% operating margin and 25% build margin. The emission coefficient from official data published in Central Electricity Authority (CEA) CO₂ Baseline database available to the project participant at the time of submission of PDD for validation and global stakeholder's consultation process. CEA is an official source of Ministry of Power, Government of India have worked out baseline as CO₂ baseline database. The assumption were verified by the validation team and found to be correct.</p> <p>The details of the Emission Factor for both NEWNE and Southern grid is provided below:</p> <p>The combined margin of the NEWNE grid used for the project activity is as follows:</p> <table><tr><th>Parameter</th><th>Value</th><th>Nomenclature</th><th>Source</th></tr><tr><td>EF_{grid,CM,y}</td><td>0.9750 tCO₂/MWh</td><td>Combined margin CO₂ emission factor for the project electricity system in year y</td><td>Calculated as the weighted average of the operating margin (0.75) & build margin (0.25) values, sourced from Baseline CO₂ Emission Database, Version 9.0 published by Central Electricity Authority (CEA), Government of India</td></tr></table>	Parameter	Value	Nomenclature	Source	EF _{grid,CM,y}	0.9750 tCO ₂ /MWh	Combined margin CO ₂ emission factor for the project electricity system in year y	Calculated as the weighted average of the operating margin (0.75) & build margin (0.25) values, sourced from Baseline CO ₂ Emission Database, Version 9.0 published by Central Electricity Authority (CEA), Government of India
Parameter	Value	Nomenclature	Source						
EF _{grid,CM,y}	0.9750 tCO ₂ /MWh	Combined margin CO ₂ emission factor for the project electricity system in year y	Calculated as the weighted average of the operating margin (0.75) & build margin (0.25) values, sourced from Baseline CO ₂ Emission Database, Version 9.0 published by Central Electricity Authority (CEA), Government of India						

	EF _{grid,OM,y}	0.9776 tCO ₂ /MWh	Operating margin CO ₂ emission factor for the project electricity system in year y	Calculated as the last 3-year (2010-11, 2011-12, 2012-13) generation-weighted average, sourced from Baseline CO ₂ Emission Database, Version 9.0, published by Central Electricity Authority (CEA), Government of India	
	EF _{grid,BM,y}	0.9673 tCO ₂ /MWh	Build margin CO ₂ emission factor for the project electricity system in year y	Baseline CO ₂ Emission Database, Version 9.0, published by Central Electricity Authority (CEA), Government of India	
	The combined margin of the Southern grid used for the project activity is as follows:				
	Parameter	Value	Nomenclature	Source	
	EF _{grid,CM,y}	0.9633 tCO ₂ /MWh	Combined margin CO ₂ emission factor for the project electricity system in year y	CEA database Version 09. Calculated as the weighted average of the operating margin (0.75) & build margin (.25) values, sourced from Baseline CO ₂ Emission Database, Version 9.0 published by Central Electricity Authority (CEA), Government of India	
	EF _{grid,OM,y}	0.9675 tCO ₂ /MWh	Operating margin CO ₂ emission factor for the project electricity system in year y	Calculated as the last 3-year (2010-11, 2011-12, 2012-13) generation-weighted average, sourced from Baseline CO ₂ Emission Database, Version 9.0, published by Central Electricity Authority (CEA), Government of India	
	EF _{grid,BM,y}	0.9509 tCO ₂ /MWh	Build margin CO ₂ emission factor for the project electricity system in year y	Baseline CO ₂ Emission Database, Version 9.0, published by Central Electricity Authority (CEA), Government of India	
The emission factor for both NEWNE and Southern grid will remain same throughout the crediting period.					

	<p>The GHD project team checked the above data against the CEA database Version 09, Government of India and verified that the OM, BM and CM value as mentioned above is correct and appropriate. The Emission Factors detailed in the above table will result in accurate and conservative estimates of emission reductions.</p> <p><u>Parameters determined ex-post:</u></p> <p>The parameters monitored ex-post involves net electricity supplied to the grid (calculated from electricity exported and imported) to the NEWNE/Southern grid by the project activity.</p> <p>As per the PDD (Version 03) the source of net electricity supplied to the grid is from the Energy Account Reports (for the state of Madhya Pradesh) and GESCOM Form B (for the state of Karnataka) supplied by State Electricity Board.</p> <p>As per the applied methodology AMS I.D Version 18 "Monitoring shall consist of metering the net electricity supplied by the project activity to the grid. Measurement results shall be cross-checked with records for sold electricity".</p> <p>Electricity export to the grid and import from the grid is metered by main and check tri-vector energy meters. The main meter reading is taken jointly on a fixed day of every month for the preceding month at the delivery point and signed by the representatives of state utility and Operation & Maintenance (O&M) personnel. In the event of failure of main meter, the check meter will be used in monitoring the electricity data. The Solar Panels is equipped with an integrated electronic meter. This meter is connected to the Central Monitoring Station (CMS) of the O&M service provider of the entire area. The generation data of Solar panels can be monitored as a real-time entity at Central Monitoring System by the O&M contractor. The agency is experienced in the monitoring system and is managing O&M of numerous other solar farm projects. The validation team therefore is of the opinion that the project participant through the O&M agency is capable of implementing the monitoring plan in the context of the project activity.</p> <p>Calibration of all the meters is done by state electricity board officials as per the industry standards. However, the calibration will be done once in a five years⁷. The energy meter recording the export and import from the grid at substation is under the control and supervision of state electricity board officials. Similarly O&M contractor is responsible for monitoring of the generation data at CMS.</p> <p>It is reported that the data will be kept for 2 years following the end of the crediting period.</p> <p>The responsibilities and authorities of project management, data handling and recording, measurement methods and QA/QC procedure have been systematically established and formalized and the same was verified during GHD's site visit. Thus, the monitoring plan is in compliance with the requirements of the applied methodology.</p>
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D.9. Duration and crediting period

Means of validation	Paragraph 154 of VVS Version 09.0 states that the DOE should determine whether the Project Participants defined the crediting period of the project activity
Findings	No relevant findings were raised during the validation process.
Conclusion	<p>According to the PDD Version 03, the start date of the proposed project activity is 05/03/2012; the expected operational lifetime is 25 years; and the crediting period is renewable and lasts for 7 years.</p> <p>The GHD Project Team assessed the crediting period information through a document review, on-Site visits, and interview with project personnel.</p>

⁷ http://www.powermin.nic.in/whats_new/pdf/Metering_Regulations.pdf

D.10. Environmental impacts

Means of validation	<p>Paragraph 157 of VVS Version 09.0 states:</p> <p><i>The DOE shall determine whether the project participants or the coordinating/managing entity conducted an analysis of the environmental impacts of the proposed CDM project activity or PoA and/or CPA, including transboundary impacts, and whether those impacts are considered significant by the project participants or the coordinating/managing entity or by the host Party.</i></p>
Findings	No relevant findings were raised during the validation process.
Conclusion	<p>In accordance with Paragraph 159 of VVS Version 09.0, the GHD team confirmed that the project activity is expected to have positive impacts and no significant adverse environmental impacts are foreseen.</p> <p>The Government of India specifies a list of project activities that require prior environmental clearance in the schedule (Page 10) of the notification S.O. 1533 (E) dated 14 September 2006 (http://envfor.nic.in/legis/eia/so1533.pdf), along with the Amendments, and the notification S.O. 3067 (E) dated 01 December 2009 published by the Ministry of Environment and Forests (MoEF) (notification S.O. 3067 (E) is available in Hindi and English language, the English Version starts from page 16). According to this schedule, solar power projects do not require a prior environmental clearance, and an EIA is not required.</p> <p>The CRA Project Team completed a review of the documents stated above and confirmed that the proposed Project Activity complies with environmental regulations in India.</p>

D.11. Local stakeholder consultation

Means of validation	<p>Paragraph 161 of VVS Version 09.0 states:</p> <p><i>The DOE shall determine whether the project participants or the coordinating/managing entity have completed a local stakeholder consultation process and that due steps were taken to engage stakeholders and solicit comments for the proposed CDM project activity or PoA and/or CPA.</i></p>
Findings	During the validation process, the GHD Project Team raised CAR 11. The details of the CAR are presented in Appendix 4.

Conclusion	<p>In accordance with paragraphs 162-165 of VVS Version 09.0, the GHD team confirmed that the stakeholder meeting was conducted. As per the CDM requirements, it is necessary to invite the relevant stakeholders, before the validation process starts. All the stakeholders were invited by hand-delivered letter to attend the stakeholders meeting. The local stakeholders' consultation meeting was attended by local persons including local villagers, local vendors and technology suppliers.</p> <p>Moreover, GHD project team noted that as per the requirement of Paragraph 78 of the CDM Project Standard Version 09 and Paragraph 162(d) of VVS Version 09, the local stakeholder consultation process needs to be carried out before the start date of the project activity. The local consultation was held on 25 August 2014 for Birla Corporation Limited (start date 18 October 2012); 28 August 2014 for Porwal Auto Components Ltd (start date 19 January 2013); 27 August 2014 for Bidar Solar Power Pvt. Ltd (start date 21 October 2013); and 29 August 2014 for Gupta Sons (start date 05 March 2012). Thus, all the stakeholder meetings were carried out after the start date of individual bundle of the project activity.</p> <p>However it is to be noted that the start date of the project activity is prior to the effective date of the CDM Project Standard Version 09 (i.e., 01 April 2015). The GHD project team reviewed the clarification by UNFCCC vide INQ-03214, which stated that for such cases i.e. start date is prior to 01 April 2015 (the date on which VVS, PS and PCP Version 09 is effective), exemptions can be sought from UNFCCC on case by case basis.</p> <p>Based on the above information, the project participant submitted inquiry number INQ-06280 requesting an exemption from Paragraph 78 of CDM Project Standard Version 09. UNFCCC issued its response to inquiry INQ-06280 on 9 May 2017 and granted this proposed project activity an exemption from Paragraph 78 of the CDM Project Standard (Version 09.0). The UNFCCC response allowed this project activity to comply with the requirements of CDM Project Standard (Version 07.0), which required that the project participant shall complete the local stakeholder consultation process before submitting the project activity to the DOE for validation. The GHD project team reviewed the associated documentation and confirmed that the project activity fulfilled the requirement of Paragraph 77 of the CDM Project Standard Version 07.0. Since an UNFCCC exemption for reference INQ-06280 is allowed for Paragraphs 78/162(d) of PS/VVS Version 09.0 respectively for this proposed project activity, the stakeholder consultation process was done correctly and accurately.</p> <p>The stakeholders identified by the project participant were local villagers who comprise the major population of the particular area, local communities and gram panchayat (Village head), Solar Panels supplier, project participant representatives, O&M Team, and other people involved in the project. The GHD project team verified that list of participants who attended the stakeholder meeting and completed feedback questionnaire were relevant. The GHD project team also verified the minutes of meeting and observed that no negative comments were received, this was cross-checked and confirmed against the information obtained during follow up interviews with the stakeholders.</p> <p>Based on interviews held during the Site Visit, a review of the PDD, documents provided by the Project Participants, including public notification and hand-delivered invitations to the local stakeholders consultation; copies of the meeting attendance lists; and details of the questions and comments raised during the meetings, the GHD project team validated that the local stakeholder consultations were completed in accordance with Paragraph 161 of VVS Version 09.0.</p> <p>In accordance with Paragraphs 162-165 of VVS Version 09.0, the GHD Project Team confirmed that the local stakeholder consultation process was satisfactorily carried out.</p>
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SECTION E. Internal quality control

Upon completion of the validation assessment by the GHD Project Team, the proposed Project Activity related materials were sent to the Technical Reviewer. The Technical Reviewer checked that the proper procedures were followed and that the conclusions made by the GHD Project Team are just. Any issues identified by the Technical Reviewer were addressed by the GHD Project Team and/or the Project Participant, as appropriate. During review, the Technical Reviewer and the GHD Project Team were able to raise additional findings at which point the Project Participant was required to sufficiently address each of the additional findings. Ultimately, once satisfied regarding the above, the Technical Reviewer issued a positive notice to the GHD Project Team based on his/her reviews. All CARs and CLs were successfully closed by the Project Participant.

All documents provided to GHD by the Project Participant were filed according to the date received and the source of the information. Documentation was placed in a private, secure filing system with restricted access to safeguard confidentiality.

SECTION F. Validation opinion

The validation was performed in accordance with the UNFCCC criteria for the CDM, Validation and Verification Standard, Version 09.0, relevant decisions from the COP/MOP and/or the CDM Executive Board, and host country criteria.

Through installation of a grid/captive usage connected 13.5 MWp solar power project in the states of Madhya Pradesh and Karnataka in India, the proposed Project Activity will result in a reduction of greenhouse gas emissions that are real, measurable, contribute to sustainable development, and will result in long-term benefits to the mitigation of climate change.

Upon completion of the validation process it is GHD's opinion that all relevant CDM and host country criteria have been satisfied. The PDD properly applies the criteria of AMS.I.D Version 18.0. Within the PDD, it was demonstrated and confirmed by the GHD Project Team that proposed Project Activity is not a likely baseline scenario. Therefore, it is GHD's opinion that the emission reductions attributable to the project are additional to any emission reductions that would occur in the absence of the Project Activity.

All CARs and CLs raised by the GHD Project Team have been satisfactorily resolved by the Project Participant.

In total, the emission reductions from the Project Activity are estimated to be 160,363 tonnes of CO₂e over a 7-year crediting period, resulting in an average of 22,909 tonnes of CO₂e annually throughout the crediting period. The estimated emission reductions have been reviewed by the GHD Project Team for completeness, accuracy, and consistency. At the conclusion of this review, GHD deemed it reasonable that the stated quantity of emission reductions may be achieved should the related assumptions and operational conditions remain unchanged.

Based on the validation assessment performed, GHD is issuing a positive Validation Opinion in regards to Project Activity and will therefore recommend the Project Activity for registration with the UNFCCC.

Appendix 1. Abbreviations

Abbreviations	Full texts
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction(s)
CMS	Central Monitoring system
CEA	Central Electricity Authority
CL	Clarification request
CM	Combined Margin
CMS	Central Monitoring system
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
EF	Emission Factor
EIA	Environmental Impact Assessment
ER	Emission Reductions
FAR	Forward Action Request
GHG	Greenhouse gas(es)
GWP	Global Warming potential
KERC	Karnataka State Electricity regulatory commission
MPERC	Madhya Pradesh Electricity regulatory commission
MOEF	Ministry of Environment and forest, Government of India
MWp	Mega-watt peak
ODA	Official Development Assistance
PP	Project Participant
PV	Photovoltaic
PPA	Power purchase agreement
PWA	Power wheeling agreement
RBI	Reserve Bank Of India

Appendix 2. Competence of team members and technical reviewers



Brent Boss

Waste Services PM and GHG Assurance Services Manager

Qualified (Education): Bachelor of Engineering (B.Eng.) in Environmental Engineering, University of Guelph, 2008

Connected (professional affiliations): Association of Professional Engineers and Geoscientists of Alberta (APEGA) - Practicing Member, Professional Engineers Ontario (PEO) - Practicing Member, Association of Professional Engineers and Geoscientists of Saskatchewan (APEGS) - Practicing Member

Professional Summary: Brent possesses skills that give clients confidence that their projects will be executed in a professional and efficient manner. Brent utilizes effective procedure development and reporting, targeted communication, good organization, and excellent people skills to bring projects to completion. His work history spans +10 years in construction, waste management, greenhouse gas assurance, and agricultural projects; specifically in the management, coordination, and administration in each of these areas. Brent's dedication to his clients in addition to the skills mentioned above has led to numerous repeat and new clients to GHD.

Greenhouse Gas Assurance Services

GGAS Manager

Internal GHD | UNFCCC CDM and ANSI
Accreditations | 2012 - present

Brent operates as the Greenhouse Gas Assurance Services (GGAS) Manager for GHD's greenhouse gas (GHG) accreditations under the United Nations Framework Convention on Climate Change (UNFCCC) Clean Development Mechanism (CDM) and the American National Standards Institute (ANSI). Brent effectively manages competency evaluations for nearly 40 staff members, assigns project team in consultation with Program Managers, and also performs a large number of Lead Auditor and Peer Review roles for our client base. Effective management of the GGAS Group has led GHD to be recognized in the industry as a top tier service provider in this field with many clients noting that GHD routinely exceeds their expectations.

Lead Verifier and Peer Reviewer

O. Reg. 452/09 Verifications | Various Clients |
ON | 2011 - present

Brent performed Lead Verifier and Peer Review roles on several Ontario Regulation (O. Reg.) 452/09 GHG verifications since 2011. As a Lead Verifier, Brent ensured that client needs and specific reporting deadlines were met. Specifically, Brent worked with individual clients to ensure that their organizations were accurately reporting emission sources in line with the regulation. Brent was also responsible for conducting Site visits to each of the organizations, in which Brent completed his works with minimal disruptions to daily operations and ensured health and safety requirements and procedures were always followed. This high level of service has led GHD to be one of the most widely utilized Verification Bodies in the Province of Ontario. Selected list of clients includes Clean Harbors, Toyota, Honda, Atlantic Packaging, Whitby Cogeneration, Labatt's, O-I Canada, Interlake/Dunn Paper, IGPC Ethanol, Jungbunzlauer, Union Gas.

Project Manager

OWMA| Cap-and-Trade Research for Ontario's
Waste Management Sector | Ontario |
2015 - present

Brent is currently leading the study completed on behalf of the Ontario Waste Management Authority (OWMA). This work follows from an announcement in April 2015 from Ontario Premier Kathleen Wynne that Ontario would be instituting a cap-and-trade system. Cap-and-trade, or emissions trading, at a high level is a market-based approach used to control pollution by providing economic incentives for achieving reductions in the emissions of pollutants. Brent is working to ensure that the overall goal of a high-level and broad spectrum determination of the magnitude of the emission offset/reduction opportunities for the waste management sector in the Ontario cap-and-trade program through projects such as landfills, organics diversion, energy from waste, recycling, biofuels, ozone depleting substances, and others.

Lead Verifier and Peer Reviewer

TCR Projects | Various Clients | United States |
2011 - present

Brent performed Lead Verifier and Peer Review roles on several The Climate Registry (TCR) verifications since 2011. As a Lead Verifier and/or Peer Reviewer, Brent has effectively managed client's needs with those of TCR. Brent has completed Site visits as required to ensure implementation, proper monitoring, and full project inclusion for the various projects. Brent has managed an internal team of Engineers and Scientists to develop issues logs/findings assessments, write complete verification reports, and provide issuance support as needed. Many of Brent's clients are repeat clients due to the professionalism, responsiveness, and accuracy of the works completed. List of clients includes Hershey's, PG&E, TCR Batch Verifier in 2011 (nearly 40 individual assignments), and San Diego Gas and Electric.



Brent Boss

Waste Services PM and GHG Assurance Services Manager

Lead Validator/Verifier and Peer Reviewer
CDM Validations/Verifications | Various Clients
| South/Central America and India |
2010 - present

Brent led the successful initiative to become the first North American based company to be an approved validation/verification body (also referred to as a Designated Operational Entity or DOE) with the United Nations Framework Convention on Climate Change (UNFCCC) - Clean Development Mechanism (CDM). Since its inception, Brent has successfully completed numerous Lead Validator/Verifier and Peer Review roles for a variety of clients across South and Central America. Brent has managed language barriers, international contract negotiations, and global stakeholder consultations to ensure the requirements of the clients and that of the UNFCCC are met. Brent also completed Site Visits as required. Selected list of clients includes Bionersis/Ably Carbon, Polaris Energy/Ram Power, Landfill Gas Canada, Gen Power Carbon Solutions, Petroleum Equipment International.

Lead Validator/Verifier and Peer Reviewer
VCS and Gold Standard Projects | Various
Clients | United States, Brazil, Turkey, India |
2010 - present

Brent performed Lead Validator/Verifier and Peer Review roles on several Verified Carbon Standard (VCS) and Gold Standard validations and verifications since 2010. As a Lead Validator/Verifier and/or Peer Reviewer, Brent has effectively managed client's needs with those of the individual programs. Brent has completed Site visits as required to ensure implementation but also public/local perception of the projects. Brent has managed an internal team of Engineers and Scientists to develop issues logs/findings assessments, write complete validation/verification reports, and provide issuance support as needed. Many of Brent's clients are repeat clients due to the professionalism, responsiveness, and accuracy of the works completed. List of clients includes Native Energy (US based project developer), Western Farmers Electric Cooperative, Acciona, Willow Creek Dairy, Borga Carbon (Turkish project developer).

Lead Verifier
AEP Verifications | Various Clients | Alberta |
2009 - present

Brent performed the Lead Verifier role on several Alberta GHG verifications under the requirements of Alberta Environment and Parks (AEP) branch (formerly referred to as Alberta Environment and Sustainable Resources Development [AESRD]). Brent managed client relationships working both on behalf of clients directly but also on behalf of AEP in the re-auditing process. Brent ensured constant communications with the clients and ensured that all reporting timelines and budgets were met. Brent has successfully managed several different scopes

of projects ranging from municipal composting operations, to oil refineries, and energy efficiency programs. Many of the clients in which Brent has managed turn into repeat clients due to the high level of service and responsiveness provided. Selected list of clients includes: BP, Clean-it-Green-it, Suncor, ALPAC, City of Medicine Hat, ECI.

Waste Management

Project Manager
City of Medicine Hat | Various Municipal
Projects | Alberta | 2015 - present

Brent provides overall project management and support to the various ongoing projects currently active with the City of Medicine Hat. Activities in the initial stages of this project are occurring in two facets; the first being the completion of a design basis study of the City's landfill site to determine options for extending its life including mining and replacement of materials, construction of a new lined landfill cell, and regaining lost air space in other areas of the landfill with the possibility of siting, permitting and designing a new landfill in the near future. This work also involves the creation of easy to use fill plans and geophysical surveying and regulatory review. The other portion of the work for the City is planning based and involves the role-out of a curbside collection program for the City for recyclable materials. Brent manages each of these scopes to ensure on-time and quality deliverables to the City.

Project Manager
Regional Municipality of Wood Buffalo |
Regional Landfill | Alberta | 2015 - present

Brent is the Project Manager for the Landfill Cell 4 Design and Construction Services project at the Regional Municipality of Wood Buffalo's Regional Landfill. The landfill cell design is currently at the 95% design stage. Following the completion of the full design package, Brent will be involved with tender support, as well project management and contract administration during the construction phase.

Project Manager
Regional Municipality of Waterloo |
Kitchener Landfill | Ontario | 2014 - present

Brent continues to manage several on-going initiatives at this Site; which is closed landfill. The Site has very unique characteristics including close proximity housing, and numerous infrastructure elements (natural gas lines, sewage drains, etc.) running through the Site. Brent has successfully worked with the Region to develop tender packages, scopes of work, etc. that meet or exceed the Regions expectations while remaining at or under budget. Specific projects underway at the Site include replacement of the existing landfill cap, surface monitoring of LFG for special events (concerts, etc.), review of



Brent Boss

Waste Services PM and GHG Assurance Services Manager

quarterly third party gas assessments, and a physical risk assessment for the development of monitoring practices.

Project Engineer

City of Regina | Landfill Gas Collection and Control System Review and Emission Calculations | Saskatchewan | 2010 - present

Brent provided specialist services related to review of effectiveness of current in-place technologies surrounding the LFG collection and control system including a review of the open flare and related SCADA data. Brent also quantified the GHG emissions for the Site from 2008 through 2014. Brent also performed an assessment of viable markets to register the GHG emission offsets with and is currently in the process of working with the City and related brokers to conclude this trading portion.

Project Manager

Regional Municipality of Niagara | Landfill Gas Collection and Control System Construction | 2012 - present

Brent provided contract administration and overall project management for the installation of the various engineering disciplines including electrical, structural, mechanical, and civil. Through on-Site Engineers, Brent managed the day to day construction of the project and was the main point of contact between GHD (formerly CRA), the Contractor, and the City; providing efficient and mutually beneficial conflict resolution providing the City confidence that the integrity of the project is being maintained. Brent also facilitated bi-weekly meetings and regular interactions with the Region and Contractor. Brent continues to work on providing construction support to the City to ensure the successful completion and installation of the flaring system and its ancillary equipment.

Project Manager

Corporation of the City of Stratford | Landfill Gas Collection and Control System Design, Construction, and Operational Support | 2011 - present

Brent effectively managed the assessment of landfill gas generation potential. Brent coordinated internal electrical, civil, mechanical, and structural engineering teams to provide the City with a design and tender package that met regulatory needs of the TSSA, ESA, and the MOECC. Brent managed the day to day construction of the project and was the main point of contact between GHD (formerly CRA), the Contractor, and the City; providing efficient and mutually beneficial conflict resolution providing the City with an overall project that finished on-time and under budget. Brent continues to work on providing operational support to the City to ensure maximized operations of the installed flaring system.

Project Manager

City of Peterborough | Peterborough Landfill | 2013

The City contacted GHD (formerly CRA) to conduct an assessment of varying pressure swings at the LFG utilization engines at their landfill site. Brent led a team of Engineers to complete several on-Site assessments in which it was diagnosed that the header pipe had been installed without proper slope considerations. Brent together with the City performed a CCTV inspection of the header to confirm the diagnosis and then managed a team of excavators and pipe fusers to repair the necessary sections of header. Following the completion of this work, Brent together with technicians from the City and GHD balanced the well field and had the engines running at or near maximum capacity.

Project Engineer

Orgaworld Canada Ltd. | Odour Control Engineering and Operations Support | 2008 - 2011

Brent worked as a Project Engineer to diagnose issues related to odour both within and without the aerobic composting facility. Brent worked with internal GHD project managers to perform draft testing (smoke testing) of doors, collection of bio-filter samples, and stack samples. Brent also assisted in several Public Liaison Committee presentations and other various public interactions, ensuring that professionalism was maintained throughout. The end result of the works performed was a significant decrease in odour related concerns and overall client satisfaction.

Work History

2006 - present	Associate, GHD (formerly Conestoga-Rovers & Associates), Waterloo, ON
	Named Associate 2015
2005	Ontario Ministry of the Environment, Toronto, ON

Other related areas of interest

Recognized (Certifications/Trainings)

- California Air Resources Board (ARB) - Lead Offset Verifier and Project Specialist for Ozone Depleting Substance and Agricultural Projects
- The Gold Standard Foundation - Fast Track Validator/Verifier
- Social Carbon - Approved Lead Verifier
- OSHA 40-hour HAZWOPER, 2008 - present



Brent Boss

Waste Services PM and GHG Assurance Services Manager

Presentations

- "Carbon Pricing & Potential Challenges and Opportunities", Ontario Waste Management Association (OWMA) Canadian Waste and Recycling Conference (Key-Note Address), Montreal, November 4, 2015, and also presented at the Annual General Meeting, Mississauga, Ontario, March 4, 2015
- "Validation of GHG Project - ISO:14065 Required Training", Internal Corporate Presentation, Waterloo, Ontario, 2014
- "Meter Training for GHG Validation/Verification Projects", Internal corporate presentation, Waterloo, Ontario, 2013
- "Current and Future Odour Management", Public Liaison Committee Meeting, London, Ontario, 2012
- "Understanding the Clean Development Mechanism (CDM) Project Development Process", Internal Corporate Webinar, Waterloo, Ontario, 2011

EDUCATION

M.Tech Energy Technology, Tezpur Central University, 2008
M.Sc. Physics, Tezpur Central University, 2006
B.Sc. Physics, Jagiroad College (Gauhati University), 2004

Other Training

ISO 14001 – Environmental Management System (IRCA), 2009
Measurement Management System (Quality Council of India), 2008
GHG Advanced Auditor Training Course (TUV NORD Cert GmBH), 2011
Renewable Energy Training course (TUV NORD Cert GmBH), 2011
Waste Water Management Training Course (TUV NORD Cert GmBH), 2011
ISO 14064 Training (TUV India Private Limited), 2012
ISO 9001 Quality Management System (IRCA), 2013
Brush up GHG auditor training Course (TUV NORD Cert GmBH), 2013

EMPLOYMENT HISTORY

2013-Present Vice-President Operations, True Quality Certifications Private Limited, Indore, India
2008-2013 JI/CDM Lead Assessor, TUV India Private Limited, Mumbai, India

PROFILE OF PROFESSIONAL ACTIVITIES

Greenhouse Gas Validation/Verification Projects

- Acted as Team leader (TL) for validation and verification of CDM, VCS, and GS project activities.
- Acted as technical reviewer (TR) for validation and verification of CDM project activities under the UNFCCC Guidelines.
- Involved in more than 20 CDM registration and 20 CDM issuance projects including:
 - Renewable Energy
 - Wastewater Treatment
 - Energy Efficiency
 - Supercritical Boilers
 - Oil and Refinery Projects
 - Waste Gas Recovery in Power Plants
- Involved in more than 20 VCS registration and issuance projects
- Technical authorization of Sector 1 - Renewable Energy by TUV NORD as per UNFCCC accreditation standard
- Preparation of validation and verification reports related to CDM, VCS and GS projects as per UNFCCC, VCS and GS standards respectively, including:
 - Desk Review

- Audit Preparation and Conduction
- Report Preparation and Submission to UNFCCC

Business and Resource Development

- Involved in developing Carbon Services and other business verticals - Energy, Water, and Sustainability

PUBLICATIONS AND PRESENTATIONS

- Deb, P., Basumallick, A., and Das, P. 2007. *Controlled Synthesis of Monodispersed Super Paramagnetic Nickel Ferrite Nanoparticles*. International Journal of Solid State Communication. 142: 702-705.



Valerie Chan Engineer

Qualified (Education): Bachelor of Science – Engineering Chemistry (B.Sc. Eng.)

Connected (professional affiliations): Professional Engineers Ontario (PEO)

Professional Summary: Valerie is a licensed professional engineer in the Province of Ontario and has over 10 years of experience in environmental engineering, specifically coordination and completion of Phase I and II ESAs; preparation of Environmental Emergency Plans; designing remedial strategies for contaminated industrial sites; soil and groundwater sampling; and managing soil, groundwater, and vapor intrusion investigations. Valerie also has several years of experience with greenhouse gas validation and verification auditing. Specific greenhouse gas project experience includes emissions from industrial processes, including power generation and electricity generation facilities; biomass-based thermal energy, wind, and solar projects.

Greenhouse Gas Validation and/or Verification

Lead Verifier / Auditing Team Member
Ontario | 2013 - Present

Valerie is the Lead Verifier for the following GHG verification projects completed in accordance with Ontario Regulation 452/09: Greenhouse Gas Emissions Reporting, and with ISO Standard ISO 14064 Greenhouse Gases – Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions (ISO 14064-3):

- INVISTA (Canada) Company, Kingston, Ontario
- INVISTA (Canada) Company, Maitland, Ontario
- Innophos Canada Inc., Port Maitland, Ontario
- CertainTeed Gypsum Canada, Inc., Mississauga, Ontario

Valerie's identification of GHG emission reporting issues has enabled clients to improve their calculation and reporting procedures in subsequent years.

Lead Verifier / Verifier
Alberta | 2013 - Present

Valerie completed verification of the Specified Gas Compliance Reports for a pulp and paper mill to provide assurance that there were no material misstatements and the information reported was accurate and consistent with the requirements of the Specified Gas Emitters Regulation (SGER). Valerie has provided prompt assistance with responses to Alberta Environment and Sustainable Resource Development audit questions.

Team Leader

United Nations Framework Convention on Climate Change (UNFCCC) Clean Development Mechanism (CDM) Projects | Various Clients | 2012 - Present

Valerie has completed validation or verification of the following UNFCCC CDM Sectoral Scope 1 Projects:

- 6 MW Solar Power Project by Arhyama Solar Power, India, 2014 – 2015
- Baragran Hydro Electric Project, 3.0 MW (being expanded to 4.9 MW) - Verification of Monitoring Period 01 January 2013 to 31 December 2013. India, 2014
- 5.35 MW Wind Power Project by GeeCee Ventures Ltd. - Verification of Monitoring Period 01 July 2011 to 31 January 2014. India, 2014
- Biomass Based Thermal Energy Projects (PoA and CPA) Malaysia, 2012 – 2013
- Recovery and Use of Associated Petroleum Gas Normally Combusted in Flare Stacks in Oil-Producing Fields (PoA and CPA), Colombia, 2012 – 2013
- Electricity Generation using Associated Gas Normally Flared in Petroleum Production Fields (PoA and CPA), Colombia, 2012 – 2013

Lead Verifier / Auditing Team Member
Recycling of Refrigerators, Freezers, and Metal-Containing Foam Insulation Panels in the South-East of Brazil | Fox & Earth Industries AG | Brazil | 2013 - Present

Valerie verified the GHG emission reductions from the capture and combustion of GHGs, specifically R11, R12, R134a, and R141b in accordance with the requirements of the Fair Recycling Foundation (formerly the Swiss Charter Foundation).

Lead Auditor in Training / Verification Team Member

Various Clients | 2013 - 2014

Valerie completed verification of the following Verified Carbon Standard (VCS) Sectoral Scope 1 Projects:

- Dempsey Ridge Wind Farm Project, Dempsey Ridge Wind Farm, LLC. – Verification of Monitoring Period 01 January 2012 to 31 December 2012. Oklahoma, 2013



Valerie Chan Engineer

- Red Hills 123 MW Wind Power Project, Western Farmers Electric Cooperative – Verification of Monitoring Period 01 January 2012 to 31 December 2012. Oklahoma, 2013
- 5.35 MW Wind Power Project by GeeCee Ventures Ltd. - Verification of Monitoring Period 29 March 2010 to 12 June 2011. India, 2014

Lead Verifier

Massachusetts | 2013

Valerie was the Lead Verifier for the following Massachusetts Greenhouse Gas (GHG) verification projects in accordance with 310 CMR 7.71: Reporting of Greenhouse Gas Emissions

- Framingham State University, Framingham, MA
- Hazen Paper Company, Holyoke, MA
- Alliance Leather Inc., Peabody, MA

Environmental Site Assessment and Due Diligence

Project Coordinator

South Dayton Dump and Landfill Site | Moraine, Ohio | 2008 - Present

Valerie is instrumental in coordinating the day to day Remedial Investigation / Feasibility Study activities at this Superfund Landfill Site. Valerie's responsibilities include

- Budget management and invoicing
- Work plan and report preparation
- Client communication
- Coordination and scheduling of field activities
- Contractor procurement

Project Engineer

Chemical Manufacturing Company | Ontario | 2004 - 2012

For several years, Valerie was the primary author of monthly Progress Reports and a contributor to Annual Monitoring Reports. Valerie coordinated with the analytical laboratory to ensure timely results reporting. Her thorough review of analytical laboratory reports ensured no questionable data was reported. She assisted in the development and maintenance of site monitoring specifications.

Project Engineer

Environmental Emergency (E2) Plan | Various Clients, Ontario | 2011 - Present

Valerie assisted several clients in the food and cold storage industries with the preparation of Environmental Emergency (E2) Plans to meet the requirements of E2 Regulations under the Canadian Environmental Protection

Act, 1999. In this role, Valerie identified client health and safety aspects that could be improved in order to efficiently and effectively protect public health, worker safety, the environment, and property.

Field Support

Various Clients | Ontario, Newfoundland, Texas, New Jersey | 2004 - 2014

Valerie travels to various locations across North America to provide field support in order to meet client deadlines. Valerie participated in the coordination and scheduling of field activities for Phase II Environmental Site Assessments, due diligence projects, and groundwater remediation activities. Her tasks included contractor procurement, drilling oversight, and collection of soil and groundwater samples. Valerie completed the work for a wide variety of clients including pulp and paper manufacturers, mining companies, and agricultural operations.

Assistant Waste Services Coordinator

Various Clients | Texas | 2004

Valerie was responsible for the proper classification of various types of waste materials in accordance with appropriate RCRA and state environmental regulatory compliance requirements in order to prepare waste characterization profiles and waste shipping manifests required to ensure proper disposal at permitted treatment, storage and disposal facilities.

Project Chemist / Quality Control Officer

Various Clients | 2004 - 2012

Valerie coordinated analytical aspects of projects including the preparation of laboratory contracts, review of laboratory results for completeness, and invoicing.

Valerie was responsible for providing chemical advice to field staff for projects across North America, to ensure that appropriate sampling and quality assurance / quality control procedures were followed.

Work history

2004 – present	GHD (formerly Conestoga-Rovers & Associates), Waterloo, ON
2003 – 2004	Analytical Services Unit, Kingston, ON

Other related areas of interest

Recognized (Certifications/Trainings)

- GHG Accounting for Renewable Energy Projects, 2015
- Fast Track Auditor and Verifier: The Gold Standard Foundation, 2014



Valerie Chan
Engineer

- Manufacturing Processes, 2012
- Environmental Site Assessment and Remediation, 2006
- WHMIS / Hazard Communication Training, 2005

Published

- "Quantifying Environmental Performance Using an Environmental Footprint Calculator", Climate Change and Technology Conference, Hamilton, Ontario, May 2009 (with D.B. Smith, A.C. Loney)

Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1	Project participant	PDD (Version 01) – 30 July 2014 PDD (Version 02) – 27 November 2014 PDD (Version 03) – 08 January 2016 PDD (Version 04) – 28 May 2016 PDD (Version 05) – 10 May 2017	NA	Project participant
2	Project participant	Modalities of communication dated 10 Jan 2015 for the Project Activity	NA	Project participant
3	Project participant	ODA dated 10 January 2015 for each project owner	NA	Project participant
4	NA	<ul style="list-style-type: none"> • Prior consideration for the project, dated 03 July 2013 • Detailed project report for the project, dated 03 July 2013 • Purchase order for the project dated 19 January 2013 • Technical specifications dated for the project • NOC from the state nodal agency for implementation of the project, dated 27 December 2013 • Wheeling agreement for the project, dated 5 May 2014 • Loan sanction letter for the project, dated 24 September 2013 	NA	Porwal Auto Components Ltd.
5	NA	<ul style="list-style-type: none"> • Prior consideration sent to Executive Board (EB) for the project, dated 05 March 2013 • Detailed project report for the project, dated 05 February 2012 • Purchase order for the project, dated 18 October 2012 • NOC for permission of synchronization of the plant with the grid from state nodal agency, dated 28 January 2013 • NOC from Madhya Pradesh Pollution Control Board, dated 04 August 2012 • Commissioning Certificate for the project, dated 23 July 2013 	NA	Birla Corporation Limited
6	NA	<ul style="list-style-type: none"> • Prior consideration sent to EB for the project, dated 29 March 2014 • Detailed project report for the project, dated April 2013 	NA	Bidar Solar Power Pvt. Ltd

No.	Author	Title	References to the document	Provider
		<ul style="list-style-type: none"> • Purchase order for the project, dated 21 October 2013 • Technical specification from Canadian Solar New Technology • NOC from Karnataka Renewable Energy Development Limited for change in location for the project, dated 05 August 2013 • NOC from Karnataka Renewable Energy Development Limited for development of the project, dated 08 June 2012 • Power purchase agreement signed between Project Participant and the State Board, Gulbarga Electricity Supply Company (DESCOM), effective 28 July 2012 		
7	NA	<ul style="list-style-type: none"> • Detailed project report for the project, dated 10 January 2012 • Prior consideration of CDM dated 2-Feb-2012 • Purchase order for the project, dated 05 March 2012 • Commissioning Certificate for the project, dated 26 March 2012 • Power purchase agreement signed between Gupta Sons and DB Malls Private Limited, dated 28 March 2013 	NA	Gupta Sons
8	NA	<p>The stakeholder consultation process documents:</p> <ol style="list-style-type: none"> 1. List of attendee 2. Minutes of meeting <p>Feedbacks from the stakeholders</p>	MOM and attendance sheet of the meeting	Project participant
9	NA	<p>RBI: Reserve Bank of India www.rbi.org.in</p> <p>Ministry of Environment and forest: www.envfor.nic.in</p> <p>UNFCCC www.cdm.unfccc.int</p> <p>CEA: Central electricity authority www.cea.nic.in</p> <p>Income tax act 1961 http://law.incometaxindia.gov.in/DIT/</p>	Reference link is provided.	Independent Search
10	NA	Letter of Approval dated 16 November 2015	NA	Ministry of Environment and forest

No.	Author	Title	References to the document	Provider
11	NA	Bundling form for Small scale CDM project activity dated 28 May 2016 Version 01	NA	Project Participant
12	NA	Tools/ guidelines used in the project activity <ul style="list-style-type: none"> • Clarification on national and/or sectoral policies Paragraph 27 EB 55 • Guidelines for the reporting and validation of Plant Load Factor Annex 11 EB 48 • Guidelines on the demonstration and assessment of Prior Consideration of the CDM EB 62 Annex 13 • Guideline for the demonstration of investment analysis Annex 05 EB62 • Tool to determine the remaining lifetime of the project activity in line with Annex 15 EB 50 • Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion, Version 2, EB 41 • Tool to calculate the emission factor for an electricity system Version 03 • Glossary of CDM terms Version 07 • Guideline for completing the PDD form for small scale CDM project activity Version 7.0 • PDD template Version 07 	UNFCCC CDM web site	UNFCCC
13	NA	2 nd notification for CDM prior consideration assessment	UNFCCC CDM web site	UNFCCC/PP
14	NA	INQ-06280 for exemption from Para 78 of PS Version 09	UNFCCC CDM web site	UNFCCC/PP

Appendix 4. Clarification requests, corrective action requests and forward action requests

Table 1. CL from this validation

CL ID	01	Section no.	PDD, Section A.5.	Date:	17/11/2014
Description of CL					
In accordance with Paragraph 40 of the CDM Project Standard (Version 07.0), "project participants shall provide information on sources of public funding for the proposed CDM Project Activity or PoA".					
The GHD Project Team request that the Project Participant provide documentation to confirm there is no public funding of the CDM Project Activity.					
Project participant response					Date:
Declaration from all project investors is being submitted to confirm that there is no public funding of the CDM Project Activity.					27/11/2014

Documentation provided by project participant	
ODA Declaration certificates dated 10 Jan 2015 for each project owner	
DOE assessment	Date: 10/01/2015
The GHD Project Team reviewed the ODA certificates, dated 10 January 2015, and confirmed the requirements of Paragraph 40 of the CDM Project Standard are met.	
<u>CL#1 is Closed Out</u>	

Table 2. CAR from this validation

CAR ID	01	Section no.	Mandatory requirement/Section A.1	Date: 17/11/2014
Description of CAR				
Paragraph 78 of the CDM Project Standard, Version 07.0 states: <i>Project participants shall obtain a letter of approval from the DNA [designated national authority] of each Party involved in the proposed CDM project activity confirming that:</i> (a) <i>The Party is a Party to the Kyoto Protocol;</i> (b) <i>Participation in the proposed CDM project activity is voluntary;</i> (c) <i>Project participants are authorized to participate in the proposed CDM project activity.</i> In accordance with Paragraph 78 of the CDM Project Standard, Version 07.0, GHD Project Team requires a letter of approval provided by the DNA, for the Party involved in the proposed Project Activity. The GHD Project Team requests letter of approval when available, and before the request for registration can be submitted.				
Project participant response				Date: 27/11/2014
The Application to MoEF has already been submitted. Project participant is waiting for the reception of HCA. As soon as it is received, we will submit the same to the DOE.				
Documentation provided by project participant				
No documents provided				
DOE assessment				Date: 10/01/2015
The Letter of Approval has not been not submitted				
<u>CAR #1 Remains Open</u>				
Project participant response				
In line to the requirements PP has now obtained HCA from the DNA of the host party that is MOEF in this case dated 16/11/2015. The copy of same is been provided to DOE for submission				
Documentation provided by project participant				
HCA copy				
DOE assessment				Date: 14/12/2015
The GHD assessment team reviewed the HCA (Host Country Approval) letter dated 16 November 2015, and confirmed the letter satisfies the requirements of CDM Project Standard paragraph Version 09. The HCA dated 16 November 2015 is checked by the assessment team provided by the project participant and confirms the following (a) The Government of India has ratified the Kyoto Protocol in August 2002 and hence is a Party to the Kyoto Protocol (b) Participation in the proposed CDM Project Activity is voluntary (c) The project contributes to Sustainable Development in India (d) The LoA refers to the precise title of the proposed CDM Project Activity – " Bundled Solar Power Project by EKI Energy Services Limited (EKIESL-CDM.July-14-01)" – mentioned in the PDD being submitted for registration				
<u>Based on the document submission and subsequent assessment CAR #1 is Closed Out</u>				

CAR ID	02	Section no.	Mandatory requirement	17/11/2014
Description of CAR				
<p>Paragraph 80 of the CDM Project Standard, Version 07.0 states: Project participants shall define the proposed CDM project activity or PoA their modalities of communication with the Board and present them in a Modalities of communication statement (MoC statement), with the following content:</p> <ul style="list-style-type: none"> (a) The title of the proposed CDM project activity or PoA (and UNFCCC reference number if available) (b) The date of submission of the MoC statement (to a DOE for inclusion in the request for registration or to the secretariat for changes after registration) (c) The designation of a focal point for each scope of authority, contact details and specimen signatures of the authorized signatories of each focal point entity (d) A list of all project participants, contact details and specimen signatures of their authorized signatories (e) The signature of an authorized signatory (electronic if available) of all project participants confirming their agreement with the MoC statement <p>In accordance with Paragraph 80 of the CDM Project Standard, the GHD Project Team requests that the Project Participant submit the Modalities of Communication (MoC) statement.</p>				
Project participant response				Date: 27/11/2014
Modalities of Communication (MoC) statement are being provided to the DOE for its perusal.				
Documentation provided by project participant				
<i>Modalities of Communication dated 10/01/2015</i>				
DOE assessment				Date: 10/01/2015
The GHD Project Team reviewed the Modalities of Communication statement and confirmed the content included the information required by Paragraph 80 of the CDM Project Standard, Version 07.0.				
CAR #2 is Closed Out				

CAR ID	03	Section no.	PDD, Section A.1, A.2 and A.3.	Date: 17/11/2014
Description of CAR				
<p>In accordance with the Attachment "Instructions for filling out the project design document form for small-scale CDM project activities" at the end of "Project design document form for small-scale CDM project activities" Version 05.0, the GHD Project Team request that the Project Participant clarify the following:</p> <ul style="list-style-type: none"> 1. The sectoral scope(s) and type of the project activity has not been mentioned in Section A.1. of the PDD. 2. A map indicating the geographical coordinates of the project activity is not provided in the PDD. 3. The list and the arrangement of the main manufacturing systems and equipment involved are not complete. Project participant is requested to provide the detailed description of equipment with rated capacity/specifications installed at site (e.g., PV modules, Inverters etc.) for all the individual project owners. 4. The location of monitoring equipment within the system has not been specified in Section A.3 of the PDD. 5. PDD is not presented in the latest template. Correction sought. <p>The Project Participants are requested to revise the PDD to include the required information.</p>				
Project participant response				Date: 27/11/2014
<ul style="list-style-type: none"> 1. Sectoral scope and type of the project activity has now been mentioned in Section A.1 of the PDD. 2. The maps have now been provided. 3. Detailed description of equipments installed at site for all the individual project owners is now being provided under Section A.3 of the PDD. 4. The PDD is revised in the latest template. <p>The location of monitoring equipments has now been mentioned in section A.3 of the PDD.</p>				
Documentation provided by project participant				
Revised PDD Version 02 dated 27-11-2014				

DOE assessment	Date:10/01/2015
<p>The GHD Project Team reviewed PDD Version 02, dated 27 November 2014, and confirmed the document was completed in accordance with the Attachment "Instruction for filling out the project design document form for small-scale CDM project activities".</p> <p>The GHD Project Team confirmed the following:</p> <ol style="list-style-type: none"> 1. The sectoral scope is now stated in Section A.1 of the revised PDD Version 02. 2. The geographical maps are now presented in the revised PDD Version 02 3. Technical details regarding installed equipment onsite is now provided in the revised PDD Version 02 4. The location of the monitoring equipment has now been included in the revised PDD Version 02 5. The PDD is revised in the latest template. <p>CAR #3 is Closed Out</p>	

CAR ID	04	Section no.	PDD, Section B.1 B.2	Date:17/11/2014
Description of CAR				
In accordance with the "Technology/measure" of AMS I.D. (Version 17.0); the GHD Project Team request that the Project Participant clarify the following information stated in section B.2 of the PDD (Version 1): <div><div>1. For Justification 01: The project activity can apply any one option between (a) and (b) of paragraph 1 of AMS I.D. Version 17.0. However, the applied option is not discussed.</div><div>2. For Justification 03: The explanation for applicability condition 3 of the AMS I.D. Version 17.0 has not specified which option (a to d) is applicable to project activity. Furthermore, the text in the explanation is cut off in the PDF.</div><div>3. For Justification 03: Applicability condition 3 of the AMS I.D. Version 17.0 includes footnotes 3, 4, 5. The same is missing in the web hosted PDD Version 01.</div><div>4. For Justification 04: Applicability condition 4 of the AMS I.D. Version 17.0 includes footnotes 6 & 7. The same is missing in the web hosted PDD Version 01.</div><div>5. For Justification 05: Applicability condition 5 of the AMS I.D. Version 17.0 includes footnote 8. The same is missing in the web hosted PDD Version 01 for Justification 06: The justification provided against applicability condition 6 of the AMS I.D. Version 17 is not correct, please revised appropriately.</div></div> For Justification 07: Applicability condition 7 of the AMS I.D. Version 17.0 includes footnote 9. The same is missing in the web hosted PDD Version 01 Also, please provide exact reference (number, title, and version) of all tools and guidance referenced by the Methodology AMS I.D in Section B.1 of the PDD. The project boundary diagram including the metering location is not provided in Section B.3 of the PDD. Based on the above points corrective action is sought for the same.				
Project participant response				Date:27/11/2014
Please refer the revised PDD. Appropriate changes have been made under Section B of the PDD.				
Documentation provided by project participant				
PDD Version 2 dated 27-11-2014				
DOE assessment				Date:10/01/2015
Following are the GHD review on the reply provided by the Project participant: <div><div>1. Justification 01 is now corrected as per the methodology requirement in the revised PDD Version 02. Option 1 (b) is applicable for the project activity and this is stated in PDD Version 02.</div><div>2. For justification 03, option (a) is applicable. The GHD Project Team confirmed the revision was made in the revised PDD Version 02.</div><div>3. The footnote references for applicability condition 03 are now provided in PDD Version 02.</div><div>4. The footnote references for applicability condition 04 are now provided in PDD Version 02.</div><div>5. The applicability conditions 05 and 06 are now revised in PDD Version 02.</div><div>6. The footnote referring to applicability condition 07 is now included in the revised PDD Version 02.</div></div> The GHD Project Team confirmed that the exact references, titles and versions of the methodology and tools are stated in the revised PDD Version 02 Section B.1. No discrepancies were identified. The metering location is included in the project boundary diagram. The revised PDD Version 02 is checked and found correct by the assessment team.				
CAR #4 is Closed Out				

CAR ID	05	Section no.	PDD, Section B.4	Date: 17/11/2014
Description of CAR				
<p>In order to confirm that the Data Source used for the calculation of grid emission factor is the latest available data at the time of PDD webhosting, the GHD Project Team request that the Project Participant include the date of the publication of the CEA data for Grid Emission Factor in the table in Section B.4 of the PDD (Version 01).</p> <p>Moreover the calculation of operating margin, build margin and combined margin is not provided in the PDD Version 01</p>				
Project participant response				Date: 27/11/2014
Please refer the revised PDD. The date of publication of CEA data for Grid Emission Factor has now been mentioned under Section B.4 of the PDD. Also, the calculation of operating margin, build margin and combined margin is now provided.				
Documentation provided by project participant				
Revised PDD version 02 dated 27-11-2014				
DOE assessment				Date: 10/01/2015
<p>The date of publication of CEA version is now stated in the revised PDD Version 02. The CEA version referenced was the current version when the PDD is submitted for global stake holder consultation process. Hence, the version of CEA used for emission reduction calculation is acceptable to the assessment team. The calculation of operating margin, build margin and combined margin is now provided in the revised PDD Version 02. The calculation of Operating Margin, Build margin and combined margin is also checked by the assessment team and found correct.</p>				
CAR #5 Is Closed Out				

CAR ID	06	Section no.	PDD, Section B.5	Date: 17/11/2014
Description of CAR				
<p>During the document review, the GHD Project Team observed the following discrepancies regarding the additionality of the project activity:</p> <ol style="list-style-type: none"> 1. The prior consideration for individual project owner is not described in detail for the project activity. 2. The UNFCCC and NCDMA acknowledgement correspondence is detailed in the PDD <p>Corrective action is sought for the same.</p>				
Project participant response				Date: 27/11/2014
<ol style="list-style-type: none"> 1. The prior consideration for individual project owner is now described in detail for the project activity. 2. The UNFCCC and NCDMA acknowledgement correspondence has now been detailed in the PDD. 				
Documentation provided by project participant				
Revised PDD version 02 dated 27-11-2014.				
DOE assessment				Date: 10/01/2015
<p>The GHD Project Team checked the prior CDM consideration for individual project participant in the revised Version 02 of PDD.</p> <p>The UNFCCC and NCDMA acknowledgement is now detailed out in the revised PDD Version 02.</p> <p>The above information is checked by the GHD team and found that the revision in the PDD Version 02 dated 27 Nov 2014 to be appropriate.</p> <p>The prior consideration for individual project owner is now described in the revised PDD Version 02. The UNFCCC and NCDMA details are now mentioned in the revised PDD Version 02.</p>				
CAR #6 Is Closed Out				

CAR ID	07	Section no.	PDD Sections B.6.1, B.6.3 and B.6.5	Date: 17/11/2014
Description of CAR				
<p>Paragraph 58 of the CDM Project Standard (Version 07.0) states:</p> <p><i>Project participants shall provide ex ante calculations of baseline, project and leakage GHG emissions as well as GHG emission reductions of the proposed CDM Project Activity or CPA for each year of the crediting period, in accordance with the selected methodology(ies) and, where applicable, the selected standardized baseline(s). Project participants shall describe all steps undertaken for these calculations and provide all results.</i></p>				

In order to check the reproducibility of emission reductions and the grid emission factor calculation; the GHD Project Team request that the Project Participant submit the emission reduction calculation spreadsheet which includes calculation of the grid emission factor for the Project Activity as per Section B.6.1 of the PDD and estimation of emission reductions as per Sections B.6.3 and B.6.4 of the PDD.	
Project participant response	Date: 27/11/2014
The ER spreadsheet which includes calculation of the grid emission factor and estimation of emission reductions is being submitted for the DOEs perusal.	
Documentation provided by project participant	
Emission reduction spreadsheet	
DOE assessment	Date: 10/01/2015
The grid emission factor calculation is provided to the assessment team in the form of emission reduction sheet Version 02, in accordance with the requirement of Section B.6.1 "Instruction for filling out the project design document form for small-scale CDM project activities".	
Moreover, the estimation of emission reduction as per the requirement of Section B.6.3 and B.6.4 "Instruction for filling out the project design document form for small-scale CDM project activities" is now detailed out in the revised Emission reduction sheet version 02. The details are checked and found correct by the assessment team.	
The detail regarding the emission reduction calculation is now provided in Section B.6.3 and B.6.4 of the revised PDD Version 02.	
CAR #7 is Closed Out	

CAR ID	08	Section no.	PDD, B.7.1, B.7.4 and Appendix 5	Date: 17/11/2014
Description of CAR				
The GHD Project Team request that the Project Participant clarify the following in the Monitoring Plan mentioned in Section 7 of the PDD (Version 1):				
<ol style="list-style-type: none"> 1. The PDD repeatedly references "Project Proponent." This is not correct UNFCCC CDM terminology. According to the Glossary - CDM Terms Version 7.0 (CDM-EB07-A04-GLOS), a party involved that intends to participate in a CDM project activity is a "Project Participant". The GHD Project Team request that the PDD be revised accordingly. 2. The Monitoring plan for captive use is not detailed in the PDD. The detail regarding wheeling loss if any is also not detailed in the PDD Version 01. 				
The operational and organisation chart is not detailed as per the monitoring stated in Section B.7.3 of the PDD.				
Project participant response				Date: 27/11/2014
<ol style="list-style-type: none"> 1. The revised PDD has now been corrected and now refers "Project Participant" and not "Project Proponent". 2. The Monitoring plan for captive use, including details of wheeling loss, is now detailed in the PDD. Section B.7.3 of the revised PDD now details the operational and organization chart. 				
Documentation provided by project participant				
Revised PDD version 02 dated 27-11-2014				
DOE assessment				Date: 10/01/2015
The project participant is now consistently specified in the revised PDD Version 02 dated 27 Nov 2014. The detail of Monitoring for captive consumption is detailed in the Section B.7.1 of the revised PDD version 02 dated 27 Nov 2014.				
The operational and organizational chart is detailed out in Section B.7.3 of the revised PDD Version 02 dated 27 Nov 2014				
GHD team observed the above changes in the revised PDD Version 02 dated 27 Nov 2014 and found the same to be appropriate as per onsite practice and requirement of the applied methodology.				
CAR #8 is Closed Out				

CAR ID	09	Section no.	PDD, Section C.1.1-2	Date: 17/11/2014
Description of CAR				
<p>The GHD Project Team requests that the Project Participant check and confirm the correct name of the document referred in Section C.1.1 for the start date of the Project Activity. Also, please justify with supporting evidence, the start date of the Project Activity as per requirement stipulated under "Glossary CDM terms".</p> <p>The GHD Project Team request that the Project Participant justifies, with evidence, how the operational lifetime of the Project Activity of 25 years is appropriately considered in Section C.1.2 of the PDD.</p>				
Project participant response				Date: 27/11/2014
<p>The document referred in Section C.1.1 for the start date of the Project Activity is now corrected. The supporting documents for the same are also being provided.</p> <p>Supporting document for considering the operational lifetime of the Project Activity of 25 years is also being submitted.</p>				
Documentation provided by project participant				
<p>Purchase Orders for all the bundle Partners</p> <p>Lifetime supporting document</p> <ul style="list-style-type: none"> • Porwal Auto: Refer Pg 4 of technical specs • Birla Corp: Refer Pg 1 of Warranty Certificate for TBP Modules • Bidar Solar: Refer Pg 1 of technical specs • Gupta Sons: Refer Pg 7 of DPR <p>Revised PDD Version 02 dated 27 November 2014</p>				
DOE assessment				Date: 10/01/2015
<p>The start date is as per the glossary of CDM terms Version 07. The same is now clearly mentioned in the revised PDD Version 02.</p> <p>The lifetime is now mentioned in the revised PDD Version 02.</p>				
CAR #9 is Closed Out				

CAR ID	10	Section no.	PDD and Methodology	Date: 04/12/2015
Description of CAR				
<p>The PDD was prepared in accordance with the methodology AMS-I.D (Version 17), which was valid from 17 June 2011 to 27 November 2014. Requests for registration under AMS-I.D. (Version 17.0) were allowed until 25 July 2015. Due to the delays with the Letter of Approval from the Host Country, the request for registration cannot proceed under AMS-I.D. Version 17.0. GHD also notes that Version 06.0 of the Project Design Document Form (CDM-PDD) was issued on 9 March 2015.</p> <p>During EB information and reporting check PDD template were obsolete. Appropriate action is sought</p>				
Project participant response				Date: 09/12/2015
<p>PDD in accordance to the latest valid version of the forms and applied methodology, is been provided to DOE for its perusal.</p> <p>PDD is revised to template version 08</p>				
Documentation provided by project participant				
<p>Revised version of PDD Version 03</p> <p>PDD dated 10/05/2017</p>				
DOE assessment				Date: 14/12/2015
<p>The Revised PDD Version 03 is now updated in the latest form Version 6.0 available at the UNFCCC web site. The requirement of the latest methodology is now adopted in the revised PDD. All the applicability criteria required by the methodology is now updated in the revised PDD Version 03.</p> <p>All the text regarding baseline, project boundary, additionality, GHG emission reduction calculation and monitoring requirement is now addressed in the revised PDD Version 03. The tool referred by the applicable methodology is now updated in the revised PDD Version 03.</p> <p>PDD dated 10/05/2017 is revised to template for small scale project activity Version 08. FVR dated 11/05/2017 is also modified to Version 02 templates for small scale project activity.</p> <p>Based on this revision CAR #10 is closed.</p>				

CAR ID	11	Section no.	Section E.1 and E.2	Date: 04/12/2015
Description of CAR				
During the desk review it was observed that Sections E.2 and E.3 of the PDDs do not include comments received and responses made during the Local Stakeholder Meetings. Corrective action is sought for the same.				
Project participant response				Date: 09/12/2015
The LSHM documents submitted to the DOE and the PDD is revised to incorporate the comments received during the meeting				
Documentation provided by project participant				
Revised version of PDD Version 03				
DOE assessment				Date: 14/12/2015
Assessment team checked the stakeholder meeting documents and found that no negative comments were received for the project activity. The questionnaire is now included in the revised PDD Version 03 and thus CAR #11 is closed out				

Table 3. FAR from this validation:

No FARs were raised by the GHD Project Team for this Project Activity

FAR ID	xx	Section no.		Date: DD/MM/YYYY
Description of FAR				
NA				
Project participant response				Date: DD/MM/YYYY
NA				
Documentation provided by project participant				
NA				
DOE assessment				Date: DD/MM/YYYY
NA				



Project no.: 88868 **Project title:** Bundled Solar Power Project by EKI Energy Services Limited (EKIESL-CDM.July-14-01)
Project team: Sukanta Das, Valerie Chan, Brent Boss **Date:** 28-05-2016

Participation requirements		Comments	Peer reviewer
The host Party has ratified the Kyoto Protocol.	<input checked="" type="checkbox"/>	The project is based in India. India has ratified and is Party to the Kyoto Protocol since 26 August 2002. India is allowed to take part in the CDM Projects. Host Party is India. Section D.2 of the Validation Report confirms this requirement.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
The host Party has designated a national authority for the CDM.	<input checked="" type="checkbox"/>	Host Party DNA as per the UNFCCC website is: https://cdm.unfccc.int/DNA/bak/view.html?CID=101	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
The host Party participates in the project voluntarily (checking that the project has been approved by the host Party's Designated National Authority).	<input checked="" type="checkbox"/>	Section D.2 of the Validation Report confirms this requirement.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
The sponsor Party has been identified and the DNA of the sponsor Party has provided a written letter of approval (LoA) that confirms participation is voluntary and refers to the precise proposed project activity title in the PDD or PoA-DD being submitted for registration? (i.e., no difference shall be found between the title in the letter and that in the PDD or PoA-DD).	<input checked="" type="checkbox"/>	Section D.2 and D.3 of the Validation Report confirms this requirement.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Did the DOE receive the LoA from the Project Participant or from the coordinating/managing entity or directly from the DNA?	<input checked="" type="checkbox"/>	Section D.2 of the Validation Report states that the LoA was provided by the Project Participant.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
The sponsor party is in compliance with Kyoto Protocol Article 5 and 7 (the requirements for national communication and keeping national GHG inventories).	<input checked="" type="checkbox"/>	N/A	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Has each Project Participant of the proposed CDM project activity or PoA has been authorized by at least one Party involved in a letter of approval? Has the coordinating/managing entity has been authorized by each host Party?	<input checked="" type="checkbox"/>	Yes, all information correctly provided. Section D.2 of the Validation Report confirms this requirement.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



Participation requirements		Comments	Peer reviewer
The Project Participant of the proposed CDM project activity or the coordinating/managing entity and Project Participant of the proposed CDM PoA are listed in tabular form in the PDD or PoA-DD. This information is consistent with the information provided in the section that contains the contact information for Project Participant. No entities other than those approved as Project Participant of the proposed CDM project activity or the coordinating/managing entity and Project Participant of the proposed CDM PoA are included in these sections of the PDD or PoA-DD.	<input checked="" type="checkbox"/>	The Project Participant information is consistent in the final PDD. The details of the project participant are presented in ANNEX 1 of the PDD.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Project Design Document Review			
(1) Does the PDD include at a minimum: <i>Note: Various findings were issued as applicable to the Project Participant regarding the items presented below. Details of which are presented throughout the Validation Report and summarized within.</i>			
Project Summary	<input checked="" type="checkbox"/>	Yes, all information correctly provided.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Baseline Methodology	<input checked="" type="checkbox"/>	The Project has used the previously approved Small Scale CDM baseline methodology AMS-I.D (Version 18.0) "Grid connected renewable electricity generation". Section D.8 of the Validation Report summarizes the Project Participant's application of the selected baseline.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Duration of the Project Activity/Crediting Period	<input checked="" type="checkbox"/>	The start date of project activity is 5 March 2012, which corresponds to the purchase order date. The operational lifetime of project activity is 25 years as per manufacturer specification. This information is stated in Sections C.1 and C.1.2, respectively, of the PDD. The project considered renewable crediting period of 7 years.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



Participation requirements		Comments	Peer reviewer
Monitoring Methodology and Plan	<input checked="" type="checkbox"/>	The monitored parameters detailed in the monitoring plan of the PDD comply with the approved methodology provided for the collection and archiving of all relevant data necessary for estimation or measuring the emission reductions within the project boundary during the crediting period. The Project Participant successfully closed out all findings related to this matter; see Section D.8 of the Validation Report.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Calculation of GHG emission reductions, using conservative assumptions for estimating emission reductions	<input checked="" type="checkbox"/>	Calculation spreadsheets were provided to GHD upon request in the findings assessment. In all instances, conservative values were used.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Environmental Impacts	<input checked="" type="checkbox"/>	The SCHEDULE (Page no 10) of the notification S.O. 1533 (E) dated 14/09/2006, read with Amendments to this notification, the notification S.O. 3067 (E) dated 01/12/2009 published by the Ministry of Environment and Forests (MoEF) (kindly noted that the notification S.O. 3067 (E) is available in Hindi and English language and English version start from page 16 of this notification), Government of India gives a list of the project activities that require a prior environmental clearance. According to this schedule solar power projects do not require a prior environmental clearance and hence an EIA did not need to be carried out.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



Participation requirements		Comments	Peer reviewer
Local Stakeholder Comments	<input checked="" type="checkbox"/>	The local stakeholder consultation process has been satisfactorily carried out. The Project Participant successfully closed out all findings related to this matter; see Section D.11 of the Validation Report.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
(2) Ensure the PDD meets the following criteria:			
The documentation is complete and comprehensive and follows the structure and criteria given in the valid CDM template.	<input checked="" type="checkbox"/>	The latest templates are used for PDD and FVR preparation. The GHD Project Team has confirmed that the content of each section of the PDD is as per UNFCCC guidelines.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
The baseline and monitoring methodologies are justified and appropriate for the specific project.	<input checked="" type="checkbox"/>	The Project has used the previously approved Small Scale CDM baseline methodology AMS-I.D (Version 18.0) "Grid connected renewable electricity generation". AMS-I.D (Version 18.0) is appropriate for the proposed Project Activity.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
The assumptions for the baseline are conservative and appropriate.	<input checked="" type="checkbox"/>	Assumptions made throughout the PDD result in a conservative and appropriate baseline.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
The description of the baseline development has considered technological, political, socio-demographic, environmental, and legal trends of relevance to the project.	<input checked="" type="checkbox"/>	The trends of relevance to the project are discussed in sections throughout the PDD as per Guidelines for completing the project design document form for small-scale CDM project activities Version 7.0. All the political, socio-demographic, environmental, and legal trends are considered while determining baseline emissions.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Additionality of the project is sufficiently demonstrated in the PDD.	<input checked="" type="checkbox"/>	Section D.8.6 of the Validation Report addresses Additionality.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



Participation requirements		Comments	Peer reviewer
All aspects related to direct and indirect emissions, including leakage, are captured in the PDD and potentially claimed emission reductions.	<input checked="" type="checkbox"/>	The project is a renewable energy project and therefore, project emissions are negligible. Since there is no transfer of technology, leakage emissions are also considered to be zero. The PDD meets the methodology requirements. The GHD Project Team confirmed all sources of emissions during the Site visit and through the review of the Emission Reduction Spreadsheets.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
The calculation of GHG emission reductions is appropriate and uses conservative assumptions for estimating emission reductions.	<input checked="" type="checkbox"/>	Yes, calculation of GHG emission reductions is appropriate and uses conservative assumptions for estimating emission reductions. Section D.8.7 of the Validation Report addresses emission reductions.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Local stakeholder consultation has been carried out and comments are taken into account in the project design.	<input checked="" type="checkbox"/>	Section D.11 of the Validation Report presents the details of the stakeholder consultations and the details of the validation.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
The technical features of the project, as well as other information about the project, have been sufficiently addressed.	<input checked="" type="checkbox"/>	GHD's Technical Review in conjunction with the Site Visit has confirmed that all technical information required is included in the PDD and supporting information.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
The monitoring plan clearly identifies the frequency of, responsibility, and authority for monitoring, measurement and data recording activities, and sufficiently describes quality control/quality assurance/management control procedures.	<input checked="" type="checkbox"/>	Section D.8.8 of the Validation Report presents the details of the Monitoring Plan review completed by GHD. The Monitoring Plan is in compliance with the methodology and tools and onsite practices.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



Participation requirements		Comments	Peer reviewer
(3) Has the PDD been prepared using the most up-to-date template from the UNFCCC?	<input checked="" type="checkbox"/>	Yes. The Project Participant has used the Project Design Document Form for Small-Scale CDM Project Activity (CDM-SSC-PDD-Form) Version 07.0 which is the most up-to-date template. Section D.6 of the Validation Report addresses this requirement.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Global Stakeholder Consultation			
(1) Post PDD on UNFCCC Website for a period of 30 days to receive global stakeholder comments and include the following: <ul style="list-style-type: none"> The name of the proposed CDM project activity or programme of activities. The Host Party/ies of the proposed CDM project activity or programme of activities. The estimated annual emission reductions indicated in the PDD, or in the case of programme of activities, the estimated annual emission reductions of all specific CPA-PDDs being made publicly available The approved methodology/ies being applied by the proposed CDM project activity or programme of activities. Reference to any previous publication of the PoA-DD and CPA-DD for public comments on the UNFCCC CDM website. The proposed start date and length of the first crediting period. The PDD. 	<input checked="" type="checkbox"/>	Posted on UNFCCC website between 17 September 2014 to 16 October 2014 Title: Bundled Solar Power Project by EKI Energy Services Limited (EKIESL-CDM.July-14-01) Host Party: India Annual estimate: 22,909 tCO ₂ e Approved Methodology: AMS.I.D Version 18. No previous publications of the PDD. Start Date: 5 March 2012 The GHD Project Team made the PDD publicly available through the dedicated interface on the UNFCCC CDM website for the Global Stakeholder Consultation, which lasted for a period of 30 days from 17/09/2014 to 16/10/2014.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Report the details of the actions taken to: <ul style="list-style-type: none"> Determine the relevance of authentic comments to issues specific to the proposed project activity, or related to compliance with the relevant CDM rules and regulations; Take due account of the authentic and relevant comments, responses by the Project Participant or the coordinating/managing entity and responses by the DOE received during the validation process. 	<input checked="" type="checkbox"/>	No comments were received during or after the consultation process.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



Participation requirements		Comments	Peer reviewer
Modalities of Communication			
<p>Has the corporate identities of all project participants, the CME, and focal points included in the Modalities of Communication (MoC) statement, as well as personal identities, specimen signatures and employment status been validated, using one or more of the following methods?</p> <ul style="list-style-type: none"> Directly checking evidence of corporate and personal identities and other relevant documentation Notarized documentation Written confirmation from the project participant or CME that all corporate and personal details, including specimen signatures are valid and accurate 	<input checked="" type="checkbox"/>	<p>The MoC, dated 10/01/2015 was submitted to the GHD Project Team. The representative for the Project Participant, designated in Appendix 1 of the PDD corresponds to the authorized signatory in the MoC statement. The GHD Project Team confirmed that the address for the signatory in the F-CDM-MOC matched the address referred to in the Letter of Approval. The CAR related to MOC is closed successfully. See Section D.5 of the Validation Report.</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
<p>If written confirmation is used to validate identity, has the following information been validated?</p> <ul style="list-style-type: none"> The MoC statement was received from a project participant that is in a contractual relationship with the DOE, or from the CME in the case of a CDM PoA. The official(s) who signs and/or submits the MoC statement to the DOE is/are duly authorized to do so on behalf of the project participant/CME 	<input checked="" type="checkbox"/>	<p>The MOC statement was received from the project participant with whom DOE has the contractual relationship.</p> <p>The signing authority is the same as mentioned in the PDD due for RFR submission.</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
<p>If the corporate identity cannot be verified by applying the above methods, have further validation activities been performed to confirm if the corporate and personal details, employment status and specimen signatures included in the MoC statement are valid and accurate?</p>	<input checked="" type="checkbox"/>	<p>The name of the person as mentioned in the PDD due for RFR is same as the signatory of the MOC. Thus no further check is required.</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
<p>The valid version of the form "Modalities of Communication statement" (CDM-MOC-FORM) has been used</p>	<input checked="" type="checkbox"/>	<p>Yes valid version of the form "Modalities of Communication statement" (CDM-MOC-FORM) has been used.</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
<p>The information required as per CDM-MOC-FORM, including its annex 1, is correctly completed</p>	<input checked="" type="checkbox"/>	<p>Yes the information required as per CDM-MOC-FORM, including its annex 1, is correctly completed.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>



Participation requirements		Comments	Peer reviewer
The project participants' authorized signatories signing the CDM-MOC-FORM correspond to the project participants' authorized signatories included in CDM-MOC-FORM Annex 1.	<input checked="" type="checkbox"/>	Yes the project participants' authorized signatories signing the CDM-MOC-FORM correspond to the project participants' authorized signatories included in CDM-MOC-FORM Annex 1.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Sustainable Development			
(1) Determine whether the letter of approval by the DNA of the host Party confirms the contribution of the proposed CDM project activity or PoA to the sustainable development of the host Party.	<input checked="" type="checkbox"/>	LoA clearly mentions that project will assist in sustainable development and the GHD Project Team checked and confirmed this. Please refer to Section D.4 of the validation report.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Project Description and Site Visit			
Is the description of the proposed CDM project activity in the PDD or PoA and CPA in the PoA-DD and CPA-DD accurate, complete, and does it provide an understanding of the proposed CDM project activity or PoA and CPA?	<input checked="" type="checkbox"/>	The definitions of the Project Activity within the PDD were sufficient such that during the Site Visit the GHD Project Team was able to confirm all aspects as stated in the PDD. Section D.7 of the Validation Report provides details.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
If the proposed CDM project activity or CPA involves the alteration of an existing installation or process, the DOE shall ensure that the project description states the differences resulting from the project activity or CPA compared to the pre-project situation.	<input checked="" type="checkbox"/>	The project is green-field project and does not involve any alteration of existing technology.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Site Visit has been completed if any of the following apply:	<input type="checkbox"/>	Site Visit conducted 14 September 2014 to 15 September 2014 Details of interviews are provided in Section C.2 and C.3 of the Validation Report.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
(a) Proposed large-scale CDM project activities or CPAs	<input checked="" type="checkbox"/>	NA	
(b) Non-bundled proposed small scale CDM project activities or proposed small-scale CDM CPAs with emission reductions exceeding 15,000 tonnes per year	<input type="checkbox"/>	NA	



Participation requirements		Comments	Peer reviewer
(c) Bundled proposed small scale CDM project activities, each with emission reductions not exceeding 15,000 tonnes per year; in such cases the number of on-site inspections may, however be based on sampling, if the sampling size is justified through statistical analysis in accordance with the "Standard for sampling and surveys for CDM project activities and programme of activities".	<input checked="" type="checkbox"/>	NA	
(4) For other individual proposed small scale CDM project activities with emission reductions not exceeding 15,000 tonnes per year the DOE may conduct a physical site visit as appropriate.	<input checked="" type="checkbox"/>	<p>The GHD project team visited the states of Madhya Pradesh and Karnataka, accompanied by a representative of EKI. All the sites in the states of Madhya Pradesh and Karnataka were visited by the GHD project team. The documents reviewed onsite are summarized in Appendix 3 of the final validation report.</p> <p>Duration of site visit: 14 September 2014 to 15 September 2014</p>	
(5) For all other proposed CDM project activities not referred to, undertake the validation by reviewing available designs and feasibility studies and may conduct comparison analysis to equivalent projects, as appropriate. The DOE may conduct physical site visit to assess the plan. For proposed CDM project activities for which the DOE does not undertake a physical site inspection this shall be appropriately justified.	<input type="checkbox"/>	NA	



Participation requirements		Comments	Peer reviewer
Baseline and Monitoring Methodology Review			
(1) The selected baseline and monitoring methodology and, where applicable, the standardized baseline is(are) applicable to the proposed CDM project activity or PoA and CPA and that the selected version(s) is(are) valid at the time of submission of the proposed CDM project activity or PoA for registration.	<input checked="" type="checkbox"/>	<p>PDD Section B.2 outlines applicability criteria for use of methodology AMS-I.D. Version 18.0 and the corresponding eligibility of the project activity. The GHD Project Team has validated that the proposed Project Activity meet the all applicability criteria.</p> <p>The AMS I.D. Version 18.0 is appropriate for the proposed project activity.</p> <p>Please refer Appendix 4 of the validation report for the closure of the CAR related to baseline and monitoring methodology. . Also please refer to Section D.8.1 of the validation report.</p>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
For each applicability condition listed in the approved selected methodology and, where applicable, the selected standardized baseline, the DOE shall describe the steps taken to assess the relevant information contained in the PDD or PoA-DD and CPA-DD against these criteria. The DOE shall provide a validation opinion regarding the applicability of the selected methodology to the proposed CDM project activity or PoA and CPA.	<input checked="" type="checkbox"/>	<p>All the applicability criteria were clearly explained in the PDD and the same is in line with site practice and document verification as well as CDM requirements.</p> <p>Please refer Appendix 4 of the validation report for the closure of the CAR related to Applicability of the methodology. Also please refer to Section D.8.1 of the validation report.</p>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Have the Project Participant requested a deviation before the publication of the PDD when applying an approved methodology to a proposed project activity or has the DOE found that the Project Participant deviated from an approved methodology? If yes, the DOE may seek guidance on the acceptability of the deviation from the Board prior to requesting registration of the proposed project activity if the DOE considers the deviation was due to a project specific issue and a methodology revision is not required to address the issue.	<input checked="" type="checkbox"/>	No deviation is envisaged for the project activity.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



Participation requirements		Comments	Peer reviewer
(2)	Has the selected methodology been correctly applied by the following with respect to the Project Boundary :		
	The PDD shall correctly describe the project boundary, including the physical delineation of the proposed CDM project activity included within the project boundary for the purpose of calculating project and baseline emissions for the proposed CDM project activity.	<input checked="" type="checkbox"/> The spatial extent of the project boundary is clearly described in the PDD. The project boundary as presented in the PDD is in line with the methodology requirement. The PDD present figures and descriptions of the delineation between the baseline scenario and the Project Activity.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
	Have all sources and GHGs required by the methodology been included within the project boundary. If the methodology allows Project Participant to choose whether a source or gas is to be included within the project boundary, determine whether the Project Participant have justified that choice. Confirm that the justification provided is reasonable, based on assessment of supporting documented evidence provided by the Project Participant and corroborated by observations if required.	<input checked="" type="checkbox"/> Basic GHG source is carbon dioxide and the same is considered as main source of GHG emission. Please refer Appendix 4 of the validation report for the closure of the CAR related to project boundary.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
(3)	Has the selected methodology been correctly applied by the following with respect to the Baseline Identification :		
	Does the PDD identify the baseline for the proposed CDM project activity, defined as the scenario that reasonably represents the anthropogenic emissions by sources of GHGs that would occur in the absence of the proposed CDM project activity?	<input checked="" type="checkbox"/> The baseline is clearly described in the PDD and in line with the requirement of the methodology. Please refer to Section D.8.5 of the validation report	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
	Confirm that any procedure contained in the methodology to identify the most reasonable baseline scenario, has been correctly applied. If the selected methodology requires use of tools to establish the baseline scenario, consult the methodology on the application of these tools. In such cases, the guidance in the methodology shall supersede the tool. The DOE shall check each step in the procedure described in the PDD against the requirements of the methodology.	<input checked="" type="checkbox"/> For green filed project direct baseline option is provided by the methodology and the same is considered by the PP. No further identification for most plausible baseline scenario is required. Please refer to Section D.8.5 of the validation report.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



Participation requirements		Comments	Peer reviewer
If the methodology requires several alternative scenarios to be considered in the identification of the most reasonable baseline scenario, based on financial expertise and local and sectoral knowledge, determine whether all scenarios that are considered by the Project Participant and are supplementary to those required by the methodology, are reasonable in the context of the proposed CDM project activity and that no reasonable alternative scenario has been excluded.	<input checked="" type="checkbox"/>	<p>For green field project direct baseline option is provided by the methodology. The baseline option provided by the methodology is used to determine baseline for the Greenfield project.</p> <p>No further identification for most plausible baseline scenario is required.</p> <p>Please refer to Section D.8.5 of the validation report.</p>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Determine whether the most plausible baseline scenario identified is reasonable by validating the assumptions, calculations and rationales used, as described in the PDD. Ensure that documents and sources referred to in the PDD are correctly quoted and interpreted.	<input checked="" type="checkbox"/>	<p>For green field project direct baseline option is provided by the methodology and the same is considered by the PP.</p> <p>No further identification for most plausible baseline scenario is required.</p>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Cross check the information provided in the PDD with other verifiable and credible sources, such as local expert opinion, if available.	<input checked="" type="checkbox"/>	Project Participant provided full third party references for all assumptions made. In all cases, GHD reviewed the sources and confirmed their validity.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Drawing on knowledge of the sector and/or advice from local experts, confirm that all relevant policies and circumstances have been identified and correctly considered in the PDD, in accordance with the guidance by the CDM Executive Board.	<input checked="" type="checkbox"/>	Please refer to Section D.8.6 of the validation report.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Determine whether the PDD provides a verifiable description of the identified baseline scenario, including a description of the technology that would be employed and/or the activities that would take place in the absence of the proposed CDM project activity.	<input checked="" type="checkbox"/>	<p>Baseline scenario was identified in the PDD was verified during the Site Visit by GHD.</p> <p>The baseline determination is detailed out in Section D.8.5 of the final validation report.</p>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



Participation requirements		Comments	Peer reviewer
(4)	Has the selected methodology been correctly applied by the following with respect to the Emission Reductions :	<input type="checkbox"/>	
	The steps taken and equations applied to calculate project emissions, baseline emissions, leakage, and emission reductions shall comply with the requirements of the selected baseline and monitoring methodology.	<input checked="" type="checkbox"/> The GHD Project Team raised a series of CARs and CLs regarding the algorithms and formulae used in the PDD. All action items were closed out based on the Project Participant responses and supporting documentation as detailed in Section D.8.7 of the Validation Report.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
	Determine whether the equations and parameters in the PDD have been correctly applied by comparing them to those in the selected approved methodology.	<input checked="" type="checkbox"/> Following the responses to the Findings Assessment, GHD reviewed the calculations and their transference to the PDD. In all cases, GHD confirmed that the Project Participant correctly applied the equations and parameters detailed in the approved methodology. Section D.8.7 of the Validation Report confirms this requirement.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
	If the methodology provides for selection between different options for equations or parameters, confirm that adequate justification has been provided and that the correct equations and parameters have been used, in accordance with the methodology selected.	<input checked="" type="checkbox"/> Selections between options were validated in accordance with the applicable methodologies. The reference of ex- ante fixed parameter in Section B.6.2 of the PDD is correct and appropriate. The assumptions fixed ex-ante is appropriate as concluded by the GHD team in Section D.8.7 of the validation report.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



Participation requirements		Comments	Peer reviewer
Verify the justification given in the PDD for the choice of data and parameters used in the equations. If data and parameters will not be monitored throughout the crediting period of the proposed CDM project activity but have already been determined and will remain fixed throughout the crediting period, assess that all data sources and assumptions are appropriate and calculations are correct, applicable to the proposed CDM project activity and will result in a conservative estimate of the emission reductions. If data and parameters will be monitored on implementation and hence become available only after validation of the project activity, the DOE shall confirm that the estimates provided in the PDD for these data and parameters are reasonable.		<input checked="" type="checkbox"/> The Project Participant selected values for grid emission factor from Baseline Carbon Dioxide Emission Database Version 9.0. The reference of ex- ante fixed parameter detailed in Section B.6.2 of the PDD is correct and appropriate. The assumptions fixed ex-ante is appropriate as concluded by the GHD Project Team in Section D.8.7 of the validation report.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Additionality			
(1)	Describe all steps taken and sources of information used to assess, cross-check, and verify the reliability and credibility of all data, rationales, assumptions, justifications and documentation provided by the project participants to support the demonstration of additionality in the PDD.	<input checked="" type="checkbox"/> The additionality of the project is justified using Guidance on demonstration of Additionality of small scale Project Activity' (Version 10). Since the project falls under positive list of grid-connected renewable electricity generation technologies thus no further demonstration of barrier is needed for the proposed project activity. The additionality argument is detailed out in Section D.8.6 of the Validation Report.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
(2)	Assess that the selected methodology has been correctly applied by completing the following with respect to Prior Consideration of the CDM:		
	If the project activities start date is prior to the date of publication of the PDD for stakeholder comments it shall be demonstrated that the CDM benefits were considered necessary in the decision to undertake the project as a proposed CDM project activity.	<input checked="" type="checkbox"/> Not applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
	Confirm that the start date of the project activity, reported in the PDD, is in accordance with the "Glossary of CDM terms". If the reported date is not in accordance with the glossary, raise a CAR to ensure that the start date is correctly reported in a revised PDD.	<input checked="" type="checkbox"/> The start date considered for the project activity is in line with the glossary of CDM terms.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



Participation requirements		Comments	Peer reviewer
In accordance with the guidance from the CDM Executive Board, determine whether it is a new project activity (a project activity with a start date on or after August 2, 2008) or an existing project activity (a project activity with a start date before August 2, 2008).	<input checked="" type="checkbox"/>	The project falls under new project category as the start date of the project falls after 2nd August 2008.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
For a new project activity, for which a PDD has not been published for global stakeholder consultation or a new methodology proposed to the CDM Executive Board before the project activity start date, ensure by means of confirmation from the UNFCCC secretariat that PPs had 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. If such a notification has not been provided by the Project Participant within six months of the project activity start date, the CDM was not seriously considered in the decision to implement the project activity.	<input checked="" type="checkbox"/>	<p>CDM Project Standard Version 09.0, Section 6.5 states that "For a proposed CDM project activity with a start date on or after 2 August 2008, project participants shall inform the host Party's designated national authority (DNA) and the secretariat of their intention to seek CDM status in accordance with the Project cycle procedure".</p> <p>In line with the above guidance, all the project investors have informed the UNFCCC and host party DNA i.e., National CDM Authority (NCDMA) of its intention to seek CDM for the proposed project activity in a defined F-CDM form within 180 days (refer table below). Hence, it can be clearly established that CDM was seriously considered in the decision to proceed with the proposed project activity.</p>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



Participation requirements		Comments	Peer reviewer
		<p>The Project Participant sent prior consideration notification through e-mails, dated 5 March 2013, 3 July 2013, 29 March 2014 and 2 February 2012 for Birla Corporation Limited, Porwal Auto, Bidar Solar, and Gupta Sons respectively. . The notifications to the UNFCCC and Indian DNA respectively, have been sent using the standardized prior consideration form by the Project Participant.</p> <p>Please refer to Section B.5 of the PDD for complete details.</p>	
<p>For an existing project activity for which the start date is prior to the date of publication of the PDD for global stakeholder consultation, assess the Project Participant prior consideration of the CDM through document reviews and shall satisfy following requirements:</p> <p>(a) Evidence that must indicate that awareness of the CDM prior to the project activity start date, and that the benefits of the CDM were a decisive factor in the decision to proceed with the project. Evidence to support this would include, inter alia, minutes and/or notes related to the consideration of the decision by the Board of Directors, or equivalent, of the Project Participant, to undertake the project as a proposed CDM project activity.</p> <p>(b) Reliable evidence from Project Participant that must indicate that continuing and real actions were taken to secure CDM status for the project in parallel with its implementation. Evidence to support this should include, inter alia, contracts with consultants for CDM/PDD/methodology services, Emission Reduction Purchase Agreements or other documentation related to the sale of the potential CERs (including correspondence with multilateral financial institutions or carbon funds), evidence of agreements or negotiations with a DOE for validation services, submission of a new methodology to the CDM Executive Board, publication in newspaper, interviews with DNA, earlier correspondence on the project with the DNA or the UNFCCC secretariat.</p>	<input checked="" type="checkbox"/>	Not Applicable.	<p>Yes <input checked="" type="checkbox"/></p> <p>No <input type="checkbox"/></p>



Participation requirements		Comments	Peer reviewer
(3) Assess that the selected methodology been correctly applied by completing the following with respect to Identification of Alternatives :	<input checked="" type="checkbox"/>		
The list of alternatives includes as one of the options that the project activity is undertaken without being registered as a proposed CDM project activity.	<input checked="" type="checkbox"/>	No alternative is required as the baseline is provided directly by the methodology.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
The list contains all plausible alternatives that are considered to be a viable means of supplying the outputs or services that are to be supplied by the proposed CDM project activity.	<input checked="" type="checkbox"/>	The Project Participant clearly shows selection of baseline as per AMS I.D. Version 18.0 with sufficient justifications as detailed in Section D.8.5 of the Validation Report.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
The alternatives comply with all applicable and enforced legislation.	<input checked="" type="checkbox"/>	Yes, selected baseline complies with all applicable and enforced legislation by India.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
(4) Assess that the selected methodology been correctly applied by completing the following with respect to Investment Analysis :			
If investment analysis has been used to demonstrate the additionality of the proposed CDM project activity, the PDD shall provide evidence that the proposed CDM project activity would not be: (a) The most economically or financially attractive alternative. (b) Economically or financially feasible, without the revenue from the sale of certified emission reductions (CERs).	<input checked="" type="checkbox"/>	Not Applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
The proposed CDM project activity would produce no financial or economic benefits other than CDM-related income. Document the costs associated with the proposed CDM project activity and the alternatives identified and demonstrate that there is at least one alternative which is less costly than the proposed CDM project activity.	<input checked="" type="checkbox"/>	Not Applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
The proposed CDM project activity is less economically or financially attractive than at least one other credible and realistic alternative.	<input checked="" type="checkbox"/>	Not Applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
The financial returns of the proposed CDM project activity would be insufficient to justify the required investment.	<input checked="" type="checkbox"/>	Not Applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Conduct a thorough assessment of all parameters and assumptions used in calculating the relevant financial indicator, and determine the accuracy and suitability of these parameters using the available evidence and expertise in relevant accounting practices.	<input checked="" type="checkbox"/>	Not Applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



Participation requirements		Comments	Peer reviewer
Cross-check the parameters against third-party or publicly available sources, such as invoices or price indices.	<input checked="" type="checkbox"/>	Not Applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Review feasibility reports, public announcements and annual financial reports related to the proposed CDM project activity and the Project Participant.	<input checked="" type="checkbox"/>	Not Applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Assess the correctness of computations carried out and documented by the Project Participant.	<input checked="" type="checkbox"/>	Not Applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Assess the sensitivity analysis by the Project Participant to determine under what conditions variations in the result would occur, and the likelihood of these conditions.	<input checked="" type="checkbox"/>	Not Applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Determine whether the type of benchmark applied is suitable for the type of financial indicator presented.	<input checked="" type="checkbox"/>	Not Applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Ensure that any risk premiums applied in determining the benchmark reflect the risks associated with the project type or activity.	<input checked="" type="checkbox"/>	Not Applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Determine whether it is reasonable to assume that no investment would be made at a rate of return lower than the benchmark by, for example, assessing previous investment decisions by the Project Participant involved and determining whether the same benchmark has been applied or if there are verifiable circumstances that have led to a change in the benchmark.	<input checked="" type="checkbox"/>	Not Applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
If a Feasibility Study Report (FSR) is used, ensure it has been the basis of the decision to proceed with the investment in the project, i.e., that the period of time between the finalization of the FSR and the investment decision is sufficiently short for the DOE to confirm that it is unlikely in the context of the underlying project activity that the input values would have materially change.	<input checked="" type="checkbox"/>	Not Applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
The values used in the PDD and associated annexes are fully consistent with the FSR, and where inconsistencies occur validate the appropriateness of the values.	<input checked="" type="checkbox"/>	Not Applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
On the basis of its specific local and sectoral expertise, confirmation is 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.	<input checked="" type="checkbox"/>	Not Applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



Participation requirements		Comments	Peer reviewer
(5) Assess that the selected methodology been correctly applied by completing the following with respect to Barrier Analysis :			
<p>If barrier analysis has been used to demonstrate the additionality of the proposed CDM project activity, the PDD shall demonstrate that the proposed CDM project activity faces barriers that:</p> <p>(a) Prevent the implementation of this type of proposed CDM project activity.</p> <p>(b) Do not prevent the implementation of at least one of the alternatives.</p>	<input checked="" type="checkbox"/>	Not Applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<p>Determine whether the barriers are real. Assess the available evidence and/or undertake interviews with relevant individuals (including members of industry associations, government officials or local experts if necessary) to determine whether the barriers listed in the PDD exist. Ensure that existence of barriers is substantiated by independent sources of data such as relevant national legislation, surveys of local conditions and national or international statistics.</p>	<input checked="" type="checkbox"/>	Not Applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<p>Determine whether the barriers prevent the implementation of the project activity but not the implementation of at least one of the possible alternatives. Since not all barriers present an insurmountable hurdle to a project activity being implemented, judge whether a barrier or set of barriers would prevent the implementation of the proposed CDM project activity and would not equally prevent implementation of at least one of the possible alternatives, in particular the identified baseline scenario.</p>	<input checked="" type="checkbox"/>	Not Applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
(6) Assess that the selected methodology been correctly applied by completing the following with respect to Common Practice Analysis :			
<p>Assess whether the geographical scope (e.g., the defined region) of the common practice analysis is appropriate for the assessment of common practice related to the project activity's technology or industry type. For certain technologies the relevant region for assessment will be local and for others it may be transnational/ global. If a region other than the entire host country is chosen, assess the explanation why this region is more appropriate.</p>	<input checked="" type="checkbox"/>	Not Applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<p>Using official sources and local and industry expertise, determine to what extent similar and operational projects (e.g., using similar technology or practice), other than CDM project activities; have been undertaken in the defined region.</p>	<input checked="" type="checkbox"/>	Not Applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



Participation requirements		Comments	Peer reviewer
If similar and operational projects, other than CDM project activities, are already "widely observed and commonly carried out" in the defined region, assess whether there are essential distinctions between the proposed CDM project activity and the other similar activities.		<input checked="" type="checkbox"/> Not Applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Monitoring Plan			
(1) Compliance of the monitoring plan in the PDD or PoA-DD and CPA-DD with the approved methodology including applicable tool(s) and, where applicable, the approved standardized baseline, and where applicable, the "Standard for sampling and surveys for CDM project activities and programme of activities":			
Identify the list of parameters required by the selected methodology including applicable tool(s) and, where applicable, the selected standardized baseline by means of document review;		<input checked="" type="checkbox"/> The GHD Project Team confirmed the monitoring parameters against the requirements of the applicable methodologies and associated tools. See Section D.8.8 of the Validation Report.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Confirm 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) and, where applicable, the standardized baseline;		<input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
(2) Assess the feasibility of the plan by means of review of the documented procedures, interviews with relevant personnel, project plans and any on-site inspection of the proposed CDM project activity or CPA, assess whether:			
The monitoring arrangements described in the monitoring plan are feasible within the project design.		<input checked="" type="checkbox"/> Yes the monitoring arrangements described in the monitoring plan are feasible within the project design. The feasibility of the monitoring design feasibility was assessed by the GHD project team during the validation site visit.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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 CDM project activity or PoA and CPA can be reported ex post and verified.		<input checked="" type="checkbox"/> Monitoring arrangements were viewed during the Site Visit and are deemed feasible based on GHD's experience with design and operation of similar monitoring systems.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



Participation requirements		Comments	Peer reviewer
Assess the proposed sampling plan in accordance with the "Standard for sampling and surveys for CDM to determine whether the proposed sampling plan provides parameter value estimates in an unbiased and reliable manner."	<input checked="" type="checkbox"/>	No sampling involved.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
If the Project Participant or CME have chosen to delay submission of the monitoring plan, determine whether the relevant sections for the monitoring plan in the PDD or PoA-DD and CPA-DD do not contain the information related to the monitoring plan and clearly state that the delayed submission of the monitoring plan has been chosen by the Project Participant or coordinating/managing entity.	<input checked="" type="checkbox"/>	The project participant has chosen to include the monitoring plan in the PDD. The feasibility of the monitoring plan was assessed by the GHD team during the validation site visit. The GHD Project Team confirmed that the monitoring is in line with the methodological requirement of AMS.I.D Version 18.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Local Stakeholder Consultation			
(1) The DOE shall, by means of document review and interviews with local stakeholders as appropriate, determine:			
Comments by local stakeholders that can reasonably be considered relevant for the proposed CDM project activity, have been invited.	<input checked="" type="checkbox"/>	No negative comments received for the project activity. The details are provided in Section D.11 of the validation report.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
The summary of the comments received as provided in the PDD is complete.	<input checked="" type="checkbox"/>	Yes the summary of the comments received as provided in the PDD is complete. The details are provided in Section D.11 of the validation report.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
The Project Participant have taken due account of any comments received and have described this process in the PDD.	<input checked="" type="checkbox"/>	The details are provided in section D.11 of the validation report. The GHD project team assessed Section E.2 and E.3 of the PDD and comments received were taken into account.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



Participation requirements		Comments	Peer reviewer
<p>The consultation process complied with, if any, applicable national regulations and was completed before:</p> <p>(i) The start date of the proposed CDM project activity or PoA and/or CPA</p> <p>(ii) The submission of the PDD or PoA-DD and CPA-DD to the DOE for validation</p>	<input checked="" type="checkbox"/>	Not applicable. No such regulation exists in the host country.	<p>Yes <input checked="" type="checkbox"/></p> <p>No <input type="checkbox"/></p>
Environmental Impacts			
<p>(1) Confirm, by means of a document review and/or using local official sources and expertise, whether the Project Participant have undertaken an analysis of environmental impacts and, if required by the host Party, an environmental impact assessment.</p>	<input checked="" type="checkbox"/>	<p>Solar energy is one of the cleanest sources of renewable energy, with no associated emissions and waste products. As per the Schedule 1 of notification issued by Ministry of Environment and Forests (MoEF), Government of India on September 14, 2006, thirty-nine activities are required to undertake environmental impact assessment studies. It is clarified by Ministry of Environment and Forest, Government of India through its Office Memorandum no. J-11013/41/2006-IA.II (I) dated 23/05/2011 that the solar photovoltaic power projects are not covered under the ambit of EIA notification, 2006 and no environment clearance is required for such projects under the provisions thereof. The proposed project activity is a solar PV power project and hence no environment clearance is required for the project activity. Thus, no detailed EIA study was conducted.</p> <p>Please refer to Section D.10 of the validation report.</p>	<p>Yes <input checked="" type="checkbox"/></p> <p>No <input type="checkbox"/></p>



Participation requirements		Comments	Peer reviewer
Validation Report			
(1) The Validation Report shall include all of the following:			
<p>Describe how the validation of the project boundary has been performed, by detailing the documentation assessed (e.g., a commissioning report) and by describing its observations during any site visit undertaken (i.e., observations of the physical site or equipment used in the process).</p> <p>Provide a statement whether the identified boundary and the selected sources and gases are justified for the project activity. Should the DOE identify emission sources that will be affected by the project activity and are not addressed by the selected approved methodology, the DOE shall request clarification of, revision to or deviation from the methodology.</p>	<input checked="" type="checkbox"/>	<p>The project boundary was deemed appropriate and in line with the methodological requirement.</p> <p>The identified GHG source is considered appropriate and correct.</p> <p>Please refer to Section D.8.4 of the validation report.</p>	<p>Yes <input checked="" type="checkbox"/></p> <p>No <input type="checkbox"/></p>
(2) Provide an opinion as to whether:			
All the assumptions and data used by the Project Participant are listed in the PDD, including their references and sources.	<input checked="" type="checkbox"/>	<p>Yes, all the assumptions and data used by the Project Participant are listed in the PDD, including their references and sources.</p> <p>Please refer to Section D.8.7 of the validation report.</p>	<p>Yes <input checked="" type="checkbox"/></p> <p>No <input type="checkbox"/></p>
All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the PDD.	<input checked="" type="checkbox"/>	<p>Yes, all documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the PDD.</p> <p>Please refer to Section D.8.7 of the validation report.</p>	<p>Yes <input checked="" type="checkbox"/></p> <p>No <input type="checkbox"/></p>
Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable.	<input checked="" type="checkbox"/>	<p>Yes, assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable.</p> <p>Please refer to Section D.8.7 of the validation report.</p>	<p>Yes <input checked="" type="checkbox"/></p> <p>No <input type="checkbox"/></p>



Participation requirements		Comments	Peer reviewer
Relevant national and/or sectoral policies and circumstances are considered and listed in the PDD.	<input checked="" type="checkbox"/>	<p>Yes, relevant national and/or sectoral policies and circumstances are considered and listed in Section B.5 of the PDD.</p> <p>The policies were evaluated by GHD project team as per host country regulations and confirms that relevant national and/or sectoral policies and circumstances are considered.</p>	<p>Yes <input checked="" type="checkbox"/></p> <p>No <input type="checkbox"/></p>
The approved baseline methodology has been correctly applied to identify the most reasonable baseline scenario and the identified baseline scenario reasonably represents what would occur in the absence of the proposed CDM project activity.	<input checked="" type="checkbox"/>	<p>Yes, the approved baseline methodology has been correctly applied to identify the most reasonable baseline scenario and the identified baseline scenario reasonably represents what would occur in the absence of the proposed CDM project activity.</p> <p>Please refer to Section D.8.5 of the Validation report.</p>	<p>Yes <input checked="" type="checkbox"/></p> <p>No <input type="checkbox"/></p>
(3) Clearly describe in the validation report the steps taken to assess the requirements for algorithms and/or formulae used and shall provide an opinion as to whether:			
All assumptions and data used by the Project Participant are listed in the PDD, including their references and sources.	<input checked="" type="checkbox"/>	<p>Yes, all assumptions and data used by the Project Participant are listed in the PDD, including their references and sources.</p> <p>Please refer to Section D.8.7 of the validation report.</p>	<p>Yes <input checked="" type="checkbox"/></p> <p>No <input type="checkbox"/></p>
All documentation used by Project Participant as the basis for assumptions and source of data is correctly quoted and interpreted in the PDD.	<input checked="" type="checkbox"/>	<p>Yes, all documentation used by Project Participant as the basis for assumptions and source of data is correctly quoted and interpreted in the PDD.</p> <p>Please refer to Section D.8.7 of the validation report.</p>	<p>Yes <input checked="" type="checkbox"/></p> <p>No <input type="checkbox"/></p>



Participation requirements		Comments	Peer reviewer
All values used in the PDD are considered reasonable in the context of the proposed CDM project activity.	<input checked="" type="checkbox"/>	Yes, all values used in the PDD are considered reasonable in the context of the proposed CDM project activity. Please refer to Section D.8.7 of the validation report.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
The baseline methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions.	<input checked="" type="checkbox"/>	Yes, the baseline methodology has been applied correctly to calculate project emissions, baseline emissions, and leakage and emission reductions. Please refer to Section D.8.7 of the validation report.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PDD.	<input checked="" type="checkbox"/>	Yes, all estimates of the baseline emissions can be replicated using the data and parameter values provided in the PDD. Please refer to Section D.8.7 of the validation report.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
The sampling efforts were undertaken in accordance with the "Standard for sampling and surveys for CDM project activities and programme of activities", where the selected methodology requires that the data and parameters be determined in accordance with the referenced standard.	<input checked="" type="checkbox"/>	No sampling is required.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



Participation requirements		Comments	Peer reviewer
(4) The validation report shall clearly describe all steps taken, and sources of information used to cross-check the information contained in the PDD on additionality. The validation report shall contain information regarding how it was determined that the documentation assessed is authentic, where appropriate.	<input checked="" type="checkbox"/>	<p>The 'Methodological Tool "Demonstration of additionality of small-scale project activities" (Version 10.0) lists grid-connected and off-grid renewable electricity generation technologies that are automatically defined as additional, without further documentation of barriers. The present project activity falls under this category of project and therefore is automatic additional. No further assessment of barrier is required for this project activity.</p> <p>The purchase order for individual project owner confirms that the capacity of the project is less than 15 MW and thus it falls under lists grid-connected and off-grid renewable electricity generation technologies.</p>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
(5) The validation report shall describe the following with respect to the consideration of CDM:	<input checked="" type="checkbox"/>		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe the validation of the project activity start date provided in the PDD.	<input checked="" type="checkbox"/>	<p>Purchase order placed amongst the bundle is considered as start date of the project activity.</p> <p>Please refer to Section D.9 of the validation report</p>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



Participation requirements		Comments	Peer reviewer
Describe the evidence for prior consideration of the CDM (if necessary) that was assessed.	<input checked="" type="checkbox"/>	<p>In line with the guidance for new project activity, all the project investors have informed the UNFCCC and host party DNA i.e. National CDM Authority (NCDMA) of its intention to seek CDM for the proposed project activity in a defined F-CDM form within 180 days. Please refer to Section B.5 of the PDD. Hence, it can be clearly established that CDM was seriously considered in the decision to proceed with the proposed project activity.</p> <p>The GHD Project Team assessed Section B.5 of the PDD and confirmed that the prior notification was sent within 180 days of project start date which is in line with the requirement of new project which falls after 2 August 2008.</p>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Provide a clear validation opinion regarding whether the proposed CDM project activity complies with the requirements of the latest version of the Guidance on prior consideration of CDM [Guidelines on the demonstration and assessment or prior consideration of the CDM].	<input checked="" type="checkbox"/>	<p>Yes, the proposed CDM project activity complies with the requirements of the latest version of the Guidance on prior consideration of CDM [Guidelines on the demonstration and assessment or prior consideration of the CDM].</p> <p>Please refer to Section D.8.6 of the Validation Report.</p>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
(6) The validation report shall describe the following with respect to Investment Analysis:			
Describe in detail how the parameters used in any financial calculations have been validated.	<input checked="" type="checkbox"/>	Not applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe how the suitability of any benchmark applied has been assessed.	<input checked="" type="checkbox"/>	Not applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Confirm whether the underlying assumptions are appropriate and the financial calculations are correct.	<input checked="" type="checkbox"/>	Not applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



Participation requirements		Comments	Peer reviewer
(7)	The validation report shall describe the following with respect to Barrier Analysis:		
	Provide an assessment of each barrier listed in the PDD, which describes how the DOE has undertaken validation of the barrier.	<input checked="" type="checkbox"/> Not applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
	Provide an overall determination of the credibility of the barrier analysis performed.	<input checked="" type="checkbox"/> Not applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
(8)	The validation report shall describe the following with respect to Common Practice Analysis:		
	How the geographical scope of the common practice analysis has been validated.	<input checked="" type="checkbox"/> Not applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
	How the DOE has undertaken an assessment of the existence of similar projects.	<input checked="" type="checkbox"/> Not applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
	How the DOE has assessed the essential distinctions between the proposed CDM project activity and any similar projects that are widely observed and commonly carried out.	<input checked="" type="checkbox"/> Not applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
	Confirmation by the DOE that the proposed CDM project activity is not common practice.	<input checked="" type="checkbox"/> Not applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
(9)	The validation report shall describe the following with respect to the Monitoring Plan:		
	State opinion of the compliance of the monitoring plan with the requirements of the methodology.	<input checked="" type="checkbox"/> The net electricity exported to the grid is considered as monitoring parameter for both the states. The consideration is in line with the methodology requirement and thus acceptable to the DOE. Please refer to Section D.8.8 of the validation report.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
	Describe the steps undertaken to assess whether the monitoring arrangements described in the monitoring plan are feasible within the project design.	<input checked="" type="checkbox"/> Yes, monitoring arrangements described in the monitoring plan are feasible within the project design. The GHD Project Team checked the monitoring arrangement during the onsite visit and observed that the onsite practice is in accordance with the methodological requirements, and thus monitoring plan is feasible. Please refer to Section D.8.8 of the validation report.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



Participation requirements		Comments	Peer reviewer
State opinion of the Project Participant's ability to implement the monitoring plan.	<input checked="" type="checkbox"/>	<p>The GHD Project Team observed, during the site visit, that the Project Participant's onsite practice is in line with the methodological requirement. The Project Participant is able to implement the monitoring plan.</p> <p>Please refer to Section D.8.8 of the validation report.</p>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
(10) The validation report shall state whether the host Party's DNA confirmed the contribution of the project to the sustainable development of the host Party. This may be reported together with the DOE's assessment of the validity of the host Party's approval.	<input checked="" type="checkbox"/>	<p>Project will contribute to the sustainable development.</p> <p>Please refer to Section D.4 of the Validation report.</p>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
(11) The validation report shall describe the following with respect to the local stakeholder consultation.			Yes <input type="checkbox"/> No <input type="checkbox"/>
Describe the steps taken to assess the adequacy of the local stakeholder consultation.	<input checked="" type="checkbox"/>	<p>The stakeholder invitation and meeting reports were checked by the assessment team. It was found that all the comments received during the stakeholder meeting are taken into consideration. No negative comments received and the nearby villagers are happy as the project generates employment opportunities.</p> <p>DOE thus confirms that stakeholder process was carried out adequately.</p> <p>Please refer to Section D.11 of the validation report.</p>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



Participation requirements		Comments	Peer reviewer
State the opinion on the adequacy of the local stakeholder consultation.		<input checked="" type="checkbox"/> The stakeholder invitation and meeting reports were checked by the assessment team. It was found that all the comments received during the stakeholder meeting are taken into consideration. No negative comments received and the nearby villagers are happy as the project generates employment opportunities. DOE thus confirms that stakeholder process was carried out adequately. Please refer to Section D.11 of the validation report.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
(12)	The validation report shall describe whether the Project Participant have undertaken an analysis of environmental impacts and, if required by the host Party, an environmental impact assessment in accordance with procedures as required by the host Party.	<input checked="" type="checkbox"/> Environment assessment is not a requirement for solar projects in the host country. Please refer to Section D.10 of the validation report.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
(13)	The validation report shall include the DOE's final validation opinion.	<input checked="" type="checkbox"/> DOE's final validation opinion is provided in the validation report. Please refer to Section F of the validation report.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
(14)	The validation report shall include the following at a minimum:		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
State conclusions regarding the proposed CDM project activity's conformity with applicable CDM requirements.		<input checked="" type="checkbox"/> The project activity is in conformity with applicable CDM requirement. Positive opinion is provided by the DOE.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



Participation requirements		Comments	Peer reviewer
Give an overview of the validation activities carried out in order to arrive at the final validation conclusions and opinion, including a general discussion of details captured by the validation protocol and conclusions related to CDM requirements.	<input checked="" type="checkbox"/>	<p>The validation process started with desk review and followed by onsite visit. Any non-compliance with CDM requirements resulted in CARs, CLs, or FARs being raised by the GHD Project Team. The Project Participant addressed and responded to the findings. Following a review of the responses and supporting documentation, The GHD Project Team closed out findings, if appropriate.</p> <p>The final validation and positive opinion was provided by the DOE. The project meets all the CDM requirements.</p>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Reflect the results of the dialogue between the DOE and the Project Participant, as well as any adjustments made to the project design following stakeholder consultation. It shall reflect the responses to CARs and CLs, and discussions on and revisions to project documentation.	<input checked="" type="checkbox"/>	Appendix 4 presents the CARs and CLs raised by the GHD Project Team and includes the responses from the Project Participants.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
A summary of the validation process and its conclusions.	<input checked="" type="checkbox"/>	The validation process and conclusions are detailed in Section A: Executive Summary of the Validation Report.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
All the applied approaches, findings and conclusions, especially on: baseline selection, additionality, emission factors and monitoring.	<input checked="" type="checkbox"/>	All the applied approaches, findings and conclusions, especially on: baseline selection, additionality, emission factors and monitoring detailed in Section D of the Validation Report.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Information on the global stakeholder's consultation carried out by the DOE prior to submitting the project for validation, including dates and how comments received have been taken into consideration.	<input checked="" type="checkbox"/>	The GHD Project Team made the PDD publicly available through the dedicated interface on the UNFCCC CDM website for the Global Stakeholder Consultation, which lasted for a period of 30 days from 17 September 2014 to 16 October 2014 See Section D.1 of the Validation Report.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



Participation requirements		Comments	Peer reviewer
A list of interviewees and documents reviewed.	<input checked="" type="checkbox"/>	Please refer FVR (Final Validation report) Section C.1 to C.3.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Details of the validation team.	<input checked="" type="checkbox"/>	Please refer FVR Section B.1	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Information on quality control within the team/of the validation process.	<input checked="" type="checkbox"/>	Please refer FVR Section B.1.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Appointment certificates or curricula vitae of the validation team members.	<input checked="" type="checkbox"/>	Please refer FVR Appendix 2.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Additionally, as per Paragraph 180 of the CDM VVS,

For certain specific validation activities such as SSC, A/R, and PoA, the DOE shall comply with the general validation requirements described in the sections above as well as those that follow, including the simplified modalities and procedures for small-scale project activities, the modalities and procedures for afforestation and reforestation project activities, and Standards for PoA.

If such services are requested with respect to small-scale project activities, the following will be assessed in addition:

Small-Scale Project Activities		Comments	Peer Reviewer
(1) Does the small-scale project qualify under the following:			
The proposed CDM project activity qualifies within the thresholds of the three possible types of small-scale project activities. It may include more than one component;	<input checked="" type="checkbox"/>	The proposed CDM project activity falls under Type I SSC project activity. The project capacity is less than 15 MWe and thus falls under Type I of SSC project activity.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
The proposed CDM project activity conforms to one or more of the approved small-scale methodologies applied in conjunction with the general guidelines to SSC CDM methodologies	<input checked="" type="checkbox"/>	The proposed project activity follows AMS.I.D Version 18.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
(2) The DOE shall determine whether a proposed small-scale CDM project activity meets the requirements of the simplified modalities and procedures for small-scale CDM project activities.	<input checked="" type="checkbox"/>	The proposed CDM project activity falls under Type I SSC project activity.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
(3) During validation of a small-scale project activity confirm:	<input checked="" type="checkbox"/>		
The project activity qualifies within the thresholds of the three possible types of small-scale project activities. It may include more than one component; for example.	<input checked="" type="checkbox"/>	The proposed CDM project activity falls under Type I SSC project activity.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



Small-Scale Project Activities		Comments	Peer Reviewer
	<input checked="" type="checkbox"/>	DOE confirmed that the small-scale methodologies were applied in conjunction with the general guidance to the methodologies.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
	<input checked="" type="checkbox"/>	DOE confirmed that the proposed small-scale project activity is not a de-bundled component of a large-scale project activity, in accordance with the "Guidelines on assessment of de-bundling for SSC project activities".	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
(4)	<input checked="" type="checkbox"/>	DOE confirmed that SSC project is additional in accordance with the Guidance on demonstration of Additionality of small scale Project Activity' (Version 10).	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
(5)			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
	<input checked="" type="checkbox"/>	DOE confirms that The proposed small-scale project activity is not a de-bundled component of a large-scale project activity, in accordance with the "Guidelines on assessment of de-bundling for SSC project activities".	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
	<input checked="" type="checkbox"/>	EIA is not a requirement for solar projects in the host country.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



Small-Scale Project Activities		Comments	Peer Reviewer
<p>Determine whether the bundle of proposed small-scale CDM project activities is designed in accordance with the applicable requirements in the "General principles for bundling" if Project Participant brings together more than one proposed small-scale CDM project activity as a bundle. A single DOE may validate the bundle of proposed small-scale CDM project activities</p>	<input checked="" type="checkbox"/>	<p>DOE confirms that the bundle of proposed small-scale CDM project activities is designed in accordance with the applicable requirements in the "General principles for bundling" if Project Participant bring together more than one proposed small-scale CDM project activity as a bundle.</p> <p>The bundle form is submitted by the PP and checked by the DOE which is in line with the requirement of bundling.</p>	<p>Yes <input checked="" type="checkbox"/></p> <p>No <input type="checkbox"/></p>