



Report

Validation Report

6 MW Solar Power Project by Arhyama Solar Power

Project Participants:
Arhyama Solar Power Pvt. Ltd

Conestoga-Rovers & Associates

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Validation Report Summary

Project Title	6 MW Solar Power Project by Arhyama Solar Power
Project Participant(s)	Arhyama Solar Power Pvt. Ltd.
Summary of Project Activity and Findings	<p>Arhyama Solar Power Pvt. Ltd. commissioned Conestoga-Rovers & Associates Limited (CRA) to complete an independent third party validation of greenhouse gas (GHG) emission offsets associated with the proposed small-scale Clean Development Mechanism (CDM) Project Activity entitled "6 MW Solar Power Project by Arhyama Solar Power".</p> <p>The proposed project activity involves the installation of a 6 MW solar photovoltaic technology based power plant at Nalgonda, Telangana. The project will replace anthropogenic emissions of greenhouse gases (GHGs), estimated to be approximately 9,535 tCO₂e per year, by displacing an average amount of electricity of 9,899 MWh/year from the generation-mix of power plants connected to the Southern grid, which is mainly dominated by thermal/fossil fuel based power plant. The Project Activity will result in reductions of GHG emissions that are real, measurable, and give long-term benefits to the mitigation of climate change.</p> <p>The Project Participant utilized the small scale CDM methodology entitled: "Grid connected renewable electricity generation"(AMS-I.D.), Version 17.0, which was valid from 17 June 2011 to 27 November 2014. Requests for registration are permitted until 25 July 2015.</p> <p>The scope of this validation is such that CRA, as an independent third party recognized as a Designated Operational Entity (DOE) by the UNFCCC, is responsible for reviewing the Project Design Document (PDD), including the monitoring plan, baseline assessment, and any supporting documentation. CRA utilized a risk based analysis against the relevant requirements of the CDM as applicable. The information in these documents was reviewed against CDM Validation and Verification Standard (Version 07.0), Kyoto Protocol requirements, CDM Executive Board/UNFCCC rules.</p>

Summary of Project Activity and Findings (cont'd.)	<p>As part of the validation process, CRA reviewed the completeness, conservativeness, and accuracy of the underlying evidence for the assumptions and claims made, and data sources used. The results of this investigation were then, together with the results of the review of other areas, combined to form the necessary input for the validation report and opinion.</p> <p>The validation report and associated appendices document a total of 13 findings for the proposed Project Activity which include:</p> <ul style="list-style-type: none">• Twelve (12) Corrective Action Requests (CARs)• One (1) Clarification Requests (CLs)• Zero (0) Forward Action Requests (FARs) <p>Upon review of the documentation and explanations provided by the Project Participant, all CARs and CLs were addressed in a clear and transparent manner. The proposed Project Activity is in accordance with applicable CDM requirements.</p>
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Abbreviations

BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEA	Central Electricity Authority
CER	Certified Emission Reduction
CERC	Central Electricity Regulatory Commission
CL	Clarification Request
CMP	Conference of the Parties serving as the Meeting of the Parties
CO ₂ e	Carbon Dioxide Equivalent
CRA	Conestoga-Rovers & Associates Limited
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board
EF	Emission Factor
EIA	Environmental Impact Assessment
ER	Emission Reduction
FAR	Forward Action Request
GHG	Greenhouse Gas
IPCC	Intergovernmental Panel on Climate Change
ISHC	International Stakeholders Consultation
JMR	Joint Meter Reading
KWh	kilo Watt-hour
LoA	Letter of Authorization
M&P	Modalities and Procedures
MoC	Modalities of Communication
MoEF	Ministry of Environment and Forest
MP	Monitoring Plan
MW	Megawatt
O&M	Operation and Maintenance
OM	Operating Margin
PDD	Project Design Document
PP	Project Participant
PPA	Power Purchase Agreement
QA/QC	Quality Assurance and Quality Control

Abbreviations

SEB	State Electricity Board
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard

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Section 1.0 Introduction

1.1 Objective

Arhyama Solar Power Pvt. Ltd commissioned Conestoga-Rovers & Associates Limited (CRA) to complete an independent third party validation of greenhouse gas (GHG) emission reductions associated with the proposed small-scale Clean Development Mechanism (CDM) Project Activity entitled: "6 MW Solar Power Project by Arhyama Solar Power".

CRA 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 20 of the UNFCCC CDM Validation and Verification Standard, Version 07.0, (VVS), the purpose of validation is to ensure a thorough and independent assessment of proposed CDM project activities against applicable CDM requirements. Furthermore, 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, CRA used a risk-based validation approach to focus and determine the detailed scope of the validation. The CDM is a rules-based mechanism, and CRA 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.

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, measurable, long-term, and additional GHG emission reductions.

1.2 Description of the CDM Project Activity

The proposed project activity involves the installation of a 6 MW solar photovoltaic technology based power plant at Nalgonda, Telangana. The project will replace anthropogenic emissions of greenhouse gases (GHGs) estimated to be approximately 9,535 tCO₂e per year, by displacing an average amount of electricity of 9,899 MWh/year from the generation-mix of power plants connected to the Southern grid, which is mainly dominated by thermal/fossil fuel based power

¹ 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.

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

The generated electricity from the Project Activity will be supplied to the Southern regional grid of India. The project aims to reduce GHG emissions by replacing the amount of electricity from the Southern regional grid which would have otherwise been generated by fossil fuel based power plants.

The proposed Project Activity applied the approved small-scale methodology: AMS-I.D. "Grid connected renewable electricity generation" Version 17.0. Version 17.0 of the methodology was valid from 17 June 2011 to 27 November 2014. Requests for registration are permitted until 25 July 2015.

1.3 Scope of Validation Process

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

As part of the validation process, CRA 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 meets 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, CRA 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 transboundary 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]*
- (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

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.

- Coverage of leakage in the baseline scenario
- Baseline emission assumptions
- Accuracy of emission calculations in the monitoring plan

The PDD submitted by the Project Participant was used as the primary basis for the validation of the proposed CDM Project Activity. The PDD was assessed for completeness by the CRA Project Team and to determine if it was comprehensive enough to provide an accurate picture of the proposed Project Activity and its baseline. The PDD provided the CRA Project Team with sufficient information regarding the technical features of the Project Activity, and other relevant information about the Project Activity that was required to complete the validation activity. The documentation was approved by the Project Participant for its completeness before it was presented to the CRA 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 CRA Project Team's document review during the validation process comprised, but was not limited to, an evaluation of the following:

- 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 as per the host country requirement
- Additionality of the Project Activity is sufficiently demonstrated in the PDD
- The eligibility/applicability criteria in the applied methodology have been met by the proposed 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 proposed 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 project description and management system described in the PDD are complete and appropriate
- The project boundaries of the Project Activity are appropriate, include all main GHG emission sources, and the physical delineation of the proposed project activity is in accordance with boundaries confirmed during the Site Visit
- Letter(s) of Approval from the Host Country(s) has been received and confirm voluntary action and sustainability development by the entity
- The start date of proposed CDM Project Activity is in accordance with the Glossary of CDM Terms, Version 07.0
- The additionality of the project is suitably demonstrated in accordance with the CDM requirement "Guidance on demonstration of Additionality of small scale Project Activity" (Version 09.0)
- The length of the Project Activity crediting period is appropriate
- An environmental analysis of Project Activity impacts, as applicable, is complete and appropriate

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 provide input for improvement of the PDD.

1.4 Validation Team

The following presents the members of the CRA Project Team for the validation of the proposed CDM Project Activity:

CRA Project Team Position

Lead Auditor / Technical Expert

Co-Team Leader

Team Member

Independent Technical Reviewer

CRA Project Team Member

Sukanta Das, M. Tech

Adam Loney, P.Eng.

Valerie Chan, P.Eng.

Brent Boss, P.Eng.

Curricula vitae for each of the CRA Project Team Members (excluding support members) are available for review on the CRA GGAS website

(<http://www.craworld.com/en/services/CDMDOEAccreditation.asp>). Additionally, curriculum

vitae for all CRA Project Team Members listed above have been provided as Appendix B of this report.

Section 2.0 Methodology

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

- Posting of the PDD for the Global Stakeholder Consultation period (period date 24 July 2014 to 22 August 2014)
- Document Review
- Preparation of Assessment List and Completion of a Site Visit on 25 August 2014
- Validation Assessment and Issuance of Corrective Action/Clarification Requests
- Review of responses to Corrective Action/Clarification Requests
- Draft Validation Report Issuance
- Technical Review and formulation of Validation Opinion
- Final Validation Report Issuance
- Request for Registration with CDM Executive Board

The validation protocol associated with this project is provided as Appendix A

2.1 Review of the CDM Project Design Document

The CDM validation process relies heavily upon documentation review. The primary document for review is the PDD. Arhyama Solar Power Pvt. Ltd provided CRA with the PDD and subsequent revisions, as follows:

<i>Project Design Document</i>	<i>Document Date</i>	<i>Date Issued to CRA</i>	<i>Version Number</i>	<i>Methodology</i>
PDD	14 July 2014	17 July 2014	1.0	AMS-I.D. Version 17.0
PDD	16 September 2014	16 September 2014	2.0	AMS-I.D. Version 17.0
PDD	09 January 2015	09 January 2015	3.0	AMS-I.D. Version 17.0
PDD	07 February 2015	09 February 2015	4.0	AMS-I.D. Version 17.0
PDD	10 February 2015	10 February 2015	5.0	AMS-I.D. Version 17.0

CRA reviewed the PDD against the approved methodology, CDM requirements, and other relevant criteria for the proposed CDM Project Activity.

2.2 Review of Additional Documentation

As part of the validation process, additional documentation supplemental to the PDD was requested and reviewed by CRA. The supplemental information included the following documents:

<i>Issued to CRA Date</i>	<i>Type of Document</i>
18 August 2014	<ul style="list-style-type: none"> • "Purchase Order.pdf", Purchase Order dated 08 February 2013, issued by Arhyama Solar Power Pvt. Ltd. to REC Modules Pte. Ltd. (Supplier) for photovoltaic solar power modules • "Power Purchase Agreement.pdf", Power Purchase Agreement between Arhyama Solar Power Pvt. Ltd. and Dr. Reddys Laboratories Limited for procurement of power generated by the Project Activity, dated October 2013 • "ODA Undertaking.pdf", declaration for No Official Development Assistance for the proposed Project Activity by Arhyama Solar Power Pvt. Ltd., dated 14 July 2014 • "NOC_central power distribution.pdf", No Objection Certificate from Central Power Distribution Company of AP Limited for Grid Connectivity of Project Activity, dated 18 January 2013 • "Commissioning Certificate.pdf", solar project commissioning certificate issued by State Electricity Board, Andhra Pradesh, dated 23 December 2013 • "NOC_NRE.pdf", NOC from New & Renewable Energy Development Corporation of Andhra Pradesh Ltd., dated 19 March 2013 • "Emission Reduction Sheet.xls", Emission Reduction Spreadsheet • "Prior Consideration_UNFCCC.pdf", intimation mail sent to UNFCCC for prior CDM consideration, dated 15 March 2013 • "Prior Consideration_NCDMA.pdf", intimation mail sent to NCDMA for prior CDM consideration, dated 15 March 2013 • "F-CDM-PC.pdf", CDM form for prior CDM consideration dated 15 March 2013

<i>Issued to CRA Date</i>	<i>Type of Document</i>
16 September 2014	<ul style="list-style-type: none"> • Host Country Letter of Approval, dated 3 September 2014 • Techno-Economic Viability Study report – Arhyama Solar Power Pvt. Ltd, prepared by D&B Solutions • Local stakeholder meeting documents dated 10 December 2012, which detail the meeting agenda and communication with the stakeholders • Arhyama Solar Power Photovoltaic Power Plan Meeting Minutes from the local stakeholder consultation process, held on 10 December 2012 • Invitation for local stake holder consultation process , dated 30 November 2012 • Lifetime Warranty Certificate for REC Peak Energy Modules, issued by REC Modules Pte. Ltd., dated 1 September 2011 • Modalities of Communication, dated 20 August 2014, provided by the Project Participant

2.3 Follow-Up Interviews with Project Stakeholders

Paragraph 23 (b) of the VVS Version 07.0 states that the DOE shall apply the means of validation specified throughout the VVS and where appropriate standard auditing techniques, including, but not limited to:

Follow-up actions (e.g., on-site visit and telephone or email interviews), including:

- (i) Interviews with relevant stakeholders in the host country, personnel with knowledge of the project design and implementation;*
- (ii) Cross checks between information provided by interviewed personnel (i.e. by checking sources or other interviews) to ensure that no relevant information has been omitted.*

CRA completed a Site Visit on 25 August 2014 to the Site of the Project Activity in Kolanpaka village, Nalgonda District, Telengana State.

During the Site Visit, CRA interviewed a series of Project Stakeholders regarding various aspects of the proposed CDM Project Activity. Mr. Vivek Kumar Ahirwar (Lead Auditor & Technical Expert)³ of CRA completed the Site Visit. The CRA Project Team interviewed the following Project Stakeholders:

<i>Name of Interviewee</i>	<i>Position and Company</i>	<i>Details of Items Discussed</i>
Mr. Anant Nakrikanti	Director, Arhyama Solar	<ul style="list-style-type: none"> – Project participants involved in CDM Project Activity – General description of the Project Activity & technology used – Public funding/ Diversion of ODA and prior CDM consideration – Monitoring procedure, monitoring parameters
Mr. Sumeet Singhvi	GM-EKI Service Private Limited	<ul style="list-style-type: none"> – Project design, baseline and project boundary – Financial additionality and IRR calculations – Emission Reduction Calculations – Monitoring procedures, monitoring parameters – Operation, maintenance, calibration, data recording, and invoicing – Environmental impacts – Stakeholder consultation – Visit to Solar panels – Duration of crediting period

The CRA Project Team also participated in opening and closing meetings at the Site. The individuals listed above were present at these meetings.

2.4 Assessment against CDM Requirements

The proposed Project Activity was assessed by the CRA Project Team against the Approved Small-Scale Methodology AMS-I.D. "Grid connected renewable electricity generation" - Version 17.0, as well as the associated methodological tools, and relevant CDM guidance documentation.

The assessment findings were categorized as a Corrective Action Request (CAR), a Forward Action Request (FAR), or a Clarification Request (CL).

³ Team Leader till 01 November 2014. The Team Leader was employed on a contract basis and he left the organization due to professional commitment elsewhere. The Client was informed via email of the proposed appointment of a new Team Leader, Sukanta Das. The Client approval of the new Team Leader was issued via email, dated 18 November 2014.

The CRA Project Team raised CARs in this Assessment if:

- The Project Participants made mistakes that influenced the ability of the project activity to achieve real, measurable, verifiable and additional emission reductions
- The applicable CDM requirements were not met
- There was a risk that emission reductions could not be monitored, calculated

FARs was raised to highlight issues related to project implementation that require review during the first verification of the Project Activity. FARs do not relate to the CDM requirements for registration and thus do not require any formal response from the CDM Project Participants.

CLs were raised if the CRA Project Team determined that the information provided by the Project Participants was insufficient, unclear, or not transparent enough to establish whether the applicable requirements were met.

2.5 Resolution of Outstanding Issues

Each CAR, FAR, and CL raised by CRA was presented in individual tables within the findings assessment (provided in Appendix C). The Project Participant was required to complete the appropriate responses and to provide, where necessary, documentation as evidence of their assumptions and/or responses.

A summary of the final results of the findings assessments is presented as follows:

<i>Finding Category</i>	<i>Number of Findings</i>
CAR	12
FAR	0
CL	1
TOTAL	13

Section 4.0 of this report will provide the details of the individual findings and the responses from the Project Participant pertaining to each of the findings.

2.6 Internal Quality Control

Upon completion of the validation assessment and recommendation by the CRA Project Team, the proposed Project Activity related materials were sent to the Independent Technical Reviewer. The Independent Technical Reviewer checked that the proper procedures were followed and that the conclusions made by the CRA Project Team are just. Any issues identified

by the Independent Technical Reviewer were addressed by the CRA Project Team and/or the Project Participant, as appropriate. During review, the Independent Technical Reviewer and the CRA Project Team were able to raise additional findings at which point the Project Participant were required to sufficiently address each of the additional findings. All findings were successfully closed by the Project Participant.

All documents provided to CRA 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 3.0 Stakeholder Consultation

3.1 Engagement with Local Stakeholders

Paragraph 145 of VVS Version 07.0 requires the following with respect to local stakeholder consultation:

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

The Project Participant held a local stakeholder meeting on 10 December 2012 at the project site in the state of Telengana. An invitation, dated 28 November 2012 was sent to Gram Panchyat⁴. In addition, a local newspaper advertisement was published on 30 November 2012. The advertisement invited interested stakeholders to the associated solar power project consultation held on 10 December 2012. The Project Participant submitted the attendance list for the consultation to the CRA Project Team. The Project Participant also provided the CRA Project Team with an opportunity to view the photographs of the local stakeholder consultation meeting during the Site Visit. During the Site Visit held on 25 August 2014, the CRA Project Team interviewed individuals from the local community and confirmed that the local stakeholders meeting had occurred and that the individuals interviewed were aware of, and in support of, the implementation of the CDM Project Activity.

Sections E.2 and E.3 of the PDD present a summary of comments received after the presentation.

⁴ Gram Panchyat is the head of 50+ villages in the vicinity of the Project Activity. An invitation to Gram Panchyat indirectly means that every individual in the vicinity of the Project Activity can attend the stakeholder meeting.

CRA concludes and validates that, based on interviews on-Site, CRA's review of the PDD, and documents provided by the Project Participant, the Project Participant provided ample notification via an advertisement in the local newspaper, and sending notification of the meeting directly to Gram Panchayat. The CRA Project Team also confirmed the local stakeholder consultation was held and the local stakeholder comments were taken into account and are presented in Sections E.2 and E.3 of PDD, Version 2, dated 16 September 2014.

Overall, there was mutual agreement among the local stakeholders interviewed by the CRA Project Team that the proposed Project Activity would lead to development of the area, mainly by generating employment opportunities, and improving the infrastructure, ultimately leading to an improved life for the inhabitants.

The local stakeholder consultation requirements detailed in Paragraphs 145 and 146 of VVS Version 07.0 were met.

3.2 Comments by Local Stakeholders

During the Local Stakeholder Consultation, the Project Participant invited comments from the attendees. The stakeholders were informed about the Project Activity. Comments were then invited from the stakeholders. No adverse comments were received. The CRA Project Team received similar feedback from the local stakeholders interviewed during the Site Visit.

Section 3.5 below presents the comments received following the Local Stakeholder Consultation.

3.3 Public Availability of PDD and Global Stakeholder Comments

The Project Participant provided the CRA Project Team with the PDD Version 1.0 on 17 July 2014. Sub-paragraphs 40 (b) and (c) of the CDM M&P require that the PDD of a proposed CDM Project Activity shall be made publicly available and the DOE shall invite comments on the validation requirements from Parties, stakeholders and UNFCCC accredited non-governmental organizations (NGOs) and make them publicly available.

The CRA Project Team made PDD Version 1.0, dated 14 July 2014, publicly available through the dedicated interface on the UNFCCC CDM website for Global Stakeholder Consultation, which lasted for a period of 30 days. The Global Stakeholder Consultation period lasted from 24 July 2014 to 22 August 2014. The website link for this Global Stakeholder Consultation is:

(<http://cdm.unfccc.int/Projects/Validation/DB/4RX61X3MBM5YI49DFPUXRKX1WBMV31/view.html>).

No comments were received from the Global Stakeholder Consultation for proposed Project Activity, as supported by the provided link.

3.4 Comments by Parties, Stakeholders, and NGOS

Aside from the local stakeholder comments discussed above, no other comments were received from any other parties, stakeholders, or NGOs during the validation process.

3.5 Incorporation of Stakeholder Comments

The following comments or questions were the only ones received during the Local Stakeholder Consultation. No comments were received from the Global Stakeholder Consultation. The Project Participant provided the following responses as outlined in the PDD, and validated by CRA.

<i>Comments from Local Stakeholders</i>	<i>Project Participant response</i>
Does the project provide employment opportunities or improve economic development of area?	The Project Participant replied that the implementation of the project activity will act as a revenue source for the local villagers in the vicinity of the project, due to employment opportunities. This will improve the economic condition and will also help villagers to lead a more successful life.
Will the project help in improving the electricity supply to the villagers or the neighbourhood areas?	The project will produce renewable electricity and the same will be fed to the regional grid. The villagers thus will not only get renewable power but will also get clean environment because of the use of solar power.
How will the project activity benefit the villages around the project site and their residents?	People will gain employment from the project activity, and the project activity thus helps to lead to a better life. Thus, the project activity benefits the village and villagers residing in the nearby area.

The CRA project team validated the above replies issued by the Project Participant during the Site Visit, in conversation with the stakeholders present during the meeting, and based on meeting minutes documentation of the Local Stakeholder Consultation Process. The project will generate job opportunities for the nearby villagers and will also lead to a better life and also ensure a clean environment for them by using renewable energy. Hence, the CRA project team confirmed that the local stakeholders meeting was completed in accordance with CDM guidance and regulations.

Section 4.0 Validation Findings

The validation findings presented in this section are based on the CRA Project Team's review of the PDD, associated documents, and follow-up with relevant stakeholders as described previously. The Validation Findings Assessment is provided as Appendix C. Based upon CRA's review; the PDD (Version 5.0) complies with the relevant forms and guidance and was prepared in accordance with the Project Design Document Form for Small-Scale CDM Project Activities (CDM-PDD-SCC-FORM), Version 05.0.

4.1 Project Design Document

The Project Participant used the Project Design Document Form for Small-Scale CDM Project Activities (CDM-PDD-SCC-FORM), Version 05.0, and followed the "Guidelines for completing the project design document form for small-scale CDM project activities". This is the latest version available at the time of completion of the validation report, which the CRA Project Team confirmed against the UNFCCC website. The PDD was completed using the latest version of the PDD form (CDM-PDD-SCC-FORM Version 05.0) appropriate to the small-scale proposed Project Activity, and completed in accordance with the relevant instructions (Guidelines for completing the project design form for small scale CDM project activities).

4.1.1 Eligibility Criteria for Small Scale Project

The proposed CDM Project Activity is a renewable solar energy Project Activity with a total installed capacity of 6 MW that supplies the generated power to the Southern grid. The CRA Project Team verified this information by reviewing the technical specifications of Photovoltaic cells stated in the Techno Economic Viability Study report issued by D&B Solutions, the purchase order, and Technical Feasibility report, and further confirmed the information by completing physical verification of the solar panels during the Site Visit.

The proposed CDM Project Activity of 6 MW qualifies well within the maximum threshold of 15 MW and meets the eligibility criteria for small-scale CDM project activities mentioned in paragraph 6 (c) of decision 17/CP.7. Also, the Project Activity conforms to type (I) (Renewable Energy Projects) and category D (Grid connected renewable electricity generation).

The Project Participant used AMS I.D Version 17.0, which is an approved small-scale methodology, valid from 17 June 2011 to 27 November 2014, with registration requests permitted up to 25 July 2015. The CRA Project Team confirmed the validity of this methodology and version using the UNFCCC site. The applicability criteria of the methodology have been described in Section 4.5 below.

The PDD states that the Project Participant did not have any other registered small scale CDM activity and has not applied for registration of another small scale CDM Project Activity within 1 km of the respective project boundaries of this Project Activity in the same project category and technology/measure. The Project Activity is not a de-bundled Project Activity. The CRA Project Team confirmed this information by completing a search of the UNFCCC web site, and during the Site Visit. The CRA Project Team interviewed the Operation and Maintenance (O&M) team during the Site Visit, and they confirmed the same.

Therefore, the CRA Project Team confirmed that the proposed Project Activity is eligible as a small-scale CDM Project Activity as per the requirements stipulated under paragraphs 157 to 163 of VVS Version 07.0.

4.2 Participation Criteria, Approval, and Authorization

The Project Participant for the proposed Project Activity is Arhyama Solar Power Pvt. Ltd. The Host country for the proposed Project Activity is India which is a Non Annex I country. India ratified the Kyoto Protocol on 26 August 2002.

Letter(s) of Approval

Paragraph 39 of the VVS, Version 07.0 requires that the DOE determine "whether the designated national authority (DNA) of each Party indicated as being involved in the proposed CDM Project Activity in the PDD has provided a written letter of approval".

The CRA Project Team raised CAR #1, because a written letter of approval from the DNA for India was not submitted by the Project Participant

Date:	26/08/2014	Raised by:	Vivek Kumar Ahirwar		
Type:	CAR	Number:	#1	Reference:	Project Standard, Version 07.0, Paragraph 78
Lead Auditor Comment:					
Paragraph 78 of the CDM Project Standard, Version 07.0 states:					
<i>78. Project participants shall obtain a letter of approval from the DNA of each Party involved in the proposed CDM project activity confirming that:</i>					
<i>(a) The Party is a Party to the Kyoto Protocol;</i>					
<i>(b) Participation in the proposed CDM project activity is voluntary;</i>					
<i>(c) 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 (Project Standard), the CRA Project Team requires a letter of approval provided by the DNA - National CDM Authority (NCDMA) Ministry of Environment & Forests, for the Party involved in the proposed Project Activity.					

Date:	26/08/2014		Raised by:	Vivek Kumar Ahirwar	
Type:	CAR	Number:	#1	Reference:	Project Standard, Version 07.0, Paragraph 78
<p>The CRA Project Team requests letter of approval when available, and before the request for registration can be submitted.</p> <p>Please clarify the statement the "Host Country Approval issued by India DNA declaring acceptability of the Sustainable Indicators by the Project Activity", which is mentioned in Section A.1 of the PDD.</p>					
Project Participant Response:				Date: 16/09/2014	
<p>The letter of approval from MoEF is being submitted for the DOE's perusal. The letter of approval specifically mentions that "The authority confirms that the project contributes to Sustainable Development in India" justifying the sentence mentioned in Section A.1.</p>					
Documentation Provided by Project Participant:					
Letter of Approval dated 03/09/2014					
Information Verified by Lead Assessor:					
<p>The CRA assessment team reviewed the HCA (Host Country Approval) letter dated 03 September 2014, and confirmed the letter satisfies the requirements of CDM Project Standard Paragraph 78.</p>					
Reasoning for Acceptance and Close Out:				Date: 19/11/2014	
<p>The HCA dated 03 September 2014 vide reference number 4/1/2014 is checked by the assessment team. The same information is also cross checked from the NCDMA website http://cdmindia.gov.in/project_details_view.php?id=2180&oid=1&page=1&reporttype=1</p> <p>The HCA clearly indicates the following points:</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 – "6 MW Solar Power Project by Arhyama Solar Power " – mentioned in the PDD being submitted for registration 					
CAR #1 is Closed Out					
Acceptance and Close out by Lead Assessor:				Date: 19/11/2014	

The Project Participant submitted the Letter of Approval (LoA) issued by the Indian DNA, "The Ministry of Environment & Forest", bearing letter No. 4/1/2014-CCC, dated 03 September 2014. The Project Participant provided the CRA Project Team with the LoA on 16 September 2014. The CRA Project Team verified the Project Activity and Project Participant names listed in the LoA against the information presented in the PDD on Page 01, Sections A.1 and A.4 of the PDD, and identified no discrepancies.

As required by Paragraph 40 of the VVS, Version 07.0, the CRA Project Team confirmed that the LoA states that:

- (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 – "6 MW Solar Power Project by Arhyama Solar Power" –being submitted for registration

In accordance with Paragraph 41 of VVS, Version 07.0, the CRA Project Team determined that the LoA is unconditional with respect to points (a) to (d) listed above.

In accordance to Paragraph 42 of VVS Version 07.0, the CRA Project Team confirmed that the LoA was issued by the Indian DNA, The Ministry of Environment & Forests (<http://www.cdmindia.gov.in/>), is authentic, and valid for the proposed CDM Project Activity, as per the list of DNAs available on UNFCCC CDM web site (<https://cdm.unfccc.int/DNA/bak/index.html>).

In accordance to Paragraph 43 of VVS Version 07.0, the CRA Project Team checked the authenticity of the Indian LoA against the Indian DNA list of approved projects, available on the National CDM Authority, Ministry of Environmental & Forests, Government of India official website (http://cdmindia.gov.in/project_details_view.php?id=2180&oid=1&page=1&reporttype=1).

CRA confirmed that LoA complies with the requirements stipulated in Paragraphs 40-43 of VVS Version 07.0.

Authorization

Paragraph 46 of the VVS, Version 07.0 requires that the DOE determine "whether each Project Participant has been authorized by at least one Party involved in a letter of approval."

The Host country for the proposed Project Activity is India. The Project Participant listed in tabular form on Page 01 and under Section A.4 of the PDD is "Arhyama Solar Power Pvt. Ltd.". The LoA letter from the Indian DNA approves the participation of "Arhyama Solar Power Pvt. Ltd."; therefore, the Project Participant is approved by a Party to the Kyoto Protocol, in accordance with Paragraph 46 of VVS, Version 07.0. The Project Participant listed in tabular form on Page 01 and under Section A.3 of the PDD is consistent with the contact details provided in Appendix 1 of the revised PDD Version 5.0.

In accordance to Paragraph 47 of VVS, Version 07.0, the CRA Project Team confirms that no entities other than those approved as the Project Participant are included in Section A.3 and Appendix 1 of the PDD.

In addition, it is observed that the CDM EB has agreed that the registration of a CDM project activity can take place without an Annex I Party being involved at the stage of registration although it should be noted that before CERs can be transferred to an Annex 1 Party, a Letter of Approval from Annex 1 Party will need to be submitted.

CRA Project Team concluded that the proposed CDM Project Activity meets all the relevant participation requirements stipulated under Paragraphs 46 to 49 of the VVS, Version 07.0.

Contribution to Sustainable Development

Paragraph 51 of the VVS, Version 07.0 requires that the DOE confirm that "the DNA has considered whether the proposed CDM Project Activity assists the host Party in achieving sustainable development".

The LoA issued by the DNA of host party India states that the DNA has determined that the Project Activity entitled "6 MW Solar Power Project by Arhyama Solar Power " contributes to the sustainable development of India.

The CRA Project Team reviewed and verified that the LoA issued by the DNA for India confirms the proposed CDM Project Activity contributes to the sustainable development of India.

During the Site Visit, the CRA Project Team reviewed and verified that the proposed CDM Project Activity contributes to the sustainable development of India. This satisfies the requirement stipulated in Paragraph 39(c) of the VVS standard Version 07.0.

Modalities of Communication (MoC)

The CRA Project Team raised CAR #2 because the Project Participant did not submit the Modalities of Communication (MoC) statement for proposed Project Activity.

Date:	26/08/2014	Raised by:	Vivek Kumar Ahirwar		
Type:	CAR	Number:	#2	Reference:	Project Standard, Version 07.0 Paragraph 80
Lead Auditor Comment:					
Paragraph 80 of the Project Standard states:					
<p><i>80. Project participants shall define for 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:</i></p> <ul style="list-style-type: none"> <i>(a) The title of the proposed CDM project activity or PoA (and UNFCCC reference number if available)</i> <i>(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)</i> <i>(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</i> <i>(d) A list of all project participants, contact details and specimen signatures of their authorized signatories</i> <i>(e) The signature of an authorized signatory (electronic if available) of all project participants confirming their agreement with the MoC statement</i> <p>In accordance with Paragraph 80 of the Project Standard Version 07.0, the CRA Project Team requests that the Project Participant submit the Modalities of Communication (MoC) statement.</p>					
Project Participant Response:				Date: 16/09/2014	
MOC is being submitted to the DOE for its perusal.					
Documentation Provided by Project Participant:					
Modalities of Communication dated 20/08/2014					
Information Verified by Lead Assessor:					
The CRA assessment team reviewed the Modalities of Communication, dated 20 October 2014 and confirmed that the requirements of the CDM Project Standard Paragraph 80 were met.					
Reasoning for Acceptance and Close Out:				Date: 19/11/2014	
The CRA assessment team reviewed the Modalities of Communication, dated 20 October 2014. The MOC was received from the Project Participant, and the signatory in the MOC is same as the name, title and designation specified in Appendix 1 of the revised PDD Version 02.					
<u>CAR #2 is Closed Out</u>					
Acceptance and Close out by Lead Assessor:				Date: 19/11/2014	

Paragraph 54 of the VVS, Version 07.0 requires that the DOE "validate the corporate identity of all project participants and focal points included in the Modalities of Communication (MoC) statement, as well as the personal identities, including specimen signatures and employment status, of their authorized signatories".

As required by Paragraph 55 of the VVS Version 07.0, the Project Participant, Arhyama Solar Power Pvt. Ltd, provided the MoC, dated 20 August 2014, to the DOE on 16 September 2014.

The representative for the Project Participant, designated in Appendix I of the PDD Version 3.0 dated 09 January 2015, corresponds to the authorized signatory in the MoC statement. The CRA Project Team confirmed that the address for the signatory in the F-CDM-MOC matched the addresses stated in the LoA provided by the Host country.

The CRA Project Team performed due diligence on the corporate and personal identities included in the MoC statement, in accordance with the requirement of Paragraphs 59 and 60 of the VVS, Version 07.0. The CRA Project Team confirmed that the MoC statement was received from the Project Participant, Arhyama Solar Power Pvt. Ltd., with whom CRA has a contractual relationship. Furthermore, the CRA Project Team confirmed that authorized signatory in the MoC statement is same who has provided the written confirmation. The CRA Project Team is of the opinion that the MOC submitted for the proposed CDM Project Activity complies with all the relevant forms and requirements stipulated under Paragraphs 59 to 61 of VVS Version 07.0

Paragraph 59 to 61 of the VVS, Version 07.0 requires that the DOE "validate that the MoC statement has been correctly completed and duly authorized".

The CRA Project Team confirmed that the MoC statement was completed using the latest version of the form F-CDM-MOC, Version 2.1. The Project Participant authorized signatory signing the F-CDM-MOC matches the authorized signatory included in F-CDM-MOC, Appendix 1. The Project Participant, Arhyama Solar Power Pvt. Ltd., is specified as the sole focal point authority and the Project Participant provided the MoC, dated 20 August 2014 to CRA.

4.3 Local Stakeholder Consultation

Paragraph 145 of the VVS, Version 07.0 requires that the DOE "determine whether the project participants have completed a local stakeholder consultation process and that due steps were taken to engage stakeholders and solicit comments for the proposed project activity".

The Project Participant held a local stakeholder meeting 10 December 2012. Details regarding the CRA validation of the local stakeholder consultation process were provided in Section 3.1, above.

To assess the adequacy of the local stakeholder consultation process, the CRA Project Team raised CAR #10 and requested documents relating to the consultation be provided as evidence of the meeting and any subsequent actions taken. The CRA Project Team raised CAR #10. The submission of local stakeholder documents led to the closure of CAR #10.

Date:	26/08/2014	Raised by:	Vivek Kumar Ahirwar		
Type:	CAR	Number:	#10	Reference:	PDD, Section E.1
Lead Auditor Comment:					
The project participant is requested to provide evidence of the local stakeholder consultation (copy of the newspaper advertisement, attendance list, copy of presentation materials and copy of any written comments from Stakeholders).					
Project Participant Response:				Date: 16/09/2014	
Evidence of the local stakeholder consultation (copy of the newspaper advertisement, attendance list, and minutes of the meeting) are being submitted.					
Documentation Provided by Project Participant:					
Newspaper advertisement, attendance list, and minutes of the meeting of the local stakeholder consultation process.					
Information Verified by Lead Assessor:					
The CRA assessment team reviewed the Minutes of Meeting and the invitation, and confirmed that evidence of the local stakeholder consultation was provided.					
Reasoning for Acceptance and Close Out:				Date: 19/11/2014	
The Minutes of meeting, invitation to local stake holder and Gram Panchayet notice is being submitted to the assessment team. The same is checked and found correct and thus it can be assessed that the stakeholder meeting is done properly.					
<u>CAR #10 is Closed Out</u>					
Acceptance and Close out by Lead Assessor:				Date: 19/11/2014	

The items noted above provided sufficient evidence to CRA that the Project Participant adequately provided multiple resources / methods to notify a representative population of Local Stakeholders of the opportunity to take part in the Local Stakeholder meeting. All questions asked during the meeting were answered and were reflected in the PDD.

According to the requirements of Paragraphs 145-147 of the VVS Version 07.0, the CRA Project Team confirmed that the local stakeholder consultation process was satisfactorily carried out.

4.4 Description of Project Activity

Paragraph 65 of the VVS, Version 07.0 requires that the DOE "determine whether the description of the proposed project activity in the PDD is accurate, complete, and provides an understanding of the proposed CDM project activity".

The proposed Project Activity is titled "6 MW Solar Power Project by Arhyama Solar Power". The uniqueness of this title was verified by searching the UNFCCC website. The project title was found to be unique and consistent with the same mentioned in the PDD Version 3.0.

CAR#9 was raised during the validation process to ensure the project activity information was correctly detailed in the PDD, and was closed successfully.

Date:	26/08/2014	Raised by:	Vivek Kumar Ahirwar		
Type:	CAR	Number:	#9	Reference:	PDD, Section C.1.1-2
Lead Auditor Comment:					
<p>The CRA 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 CRA Project Team requests that the Project Participant justify, 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: 16/09/2014	
<ol style="list-style-type: none"> 1. The start date of the project is construction, implementation or real action of the project as per glossary of CDM terms. The Purchase order placed is the real action and hence considered as the start date of the project. 2. The manufacturer specification is now provided to DOE against the claim of 25 years of operational lifetime 					
Documentation Provided by Project Participant:					
Technical Specifications PDD Version 2 dated 16/09/2014					
Information Verified by Lead Assessor:					
The CRA assessment team reviewed the provided documents related to technical lifetime, and PDD Version 02.					
Reasoning for Acceptance and Close Out:				Date: 19/11/2014	
<p>Following is the review of CRA team:</p> <p>The start date is considered as per the glossary of CDM terms Version 07. Purchase order is being considered as the start date and the same is acceptable to the CRA team.</p> <p>The manufacturer specification is checked and the lifetime as confirmed in the PDD is deemed correct.</p> <p><u>CAR #9 is Closed Out</u></p>					
Acceptance and Close out by Lead Assessor:				Date: 19/11/2014	

The project design and its objectives have been transparently explained in the PDD and are consistent with the timeline of the project history. All the solar panels of the proposed CDM project activity are connected to the State Electricity Board (SEB) substation and the details of the evacuation system are given in Section A.1 of the PDD, this was confirmed during the Site Visit. It is noted that the monitoring of electricity exported and imported by the Project Activity is completed at a single metering point located at the SEB substation. The metering point arrangement is completely under the control of the SEB and the Project Participant doesn't have any control over metering.

The details of the monitoring procedure are transparently discussed in Section B.7.2 of the PDD, and are validated in Section 4.9 of this report. The CRA Project Team verified the technical details of the photovoltaic panels of the proposed Project Activity against the technical

specifications for the solar panels specified in the proposal provided by REC Solar Asia Pacific. The CRA Project Team also cross-checked the purchase orders of solar panels against the technical specifications for the solar panels and found no discrepancies.

Paragraph 36 of the Project Standard Version 7.0 states: "Project participants shall provide a description of the proposed CDM project activity or PoA that provides an understanding of the nature of the project and its implementation".

The information provided in the PDD specifies the project site along with its geographical coordinates. The project is located at Kolanpaka Village, Aleir Mandal, Nalgonda District of Andhra Pradesh. The land is located about 1000 meters from the main road. The Project is located 17° 63" North and 79° 01" East. The CRA Project Team cross-checked these coordinates using the Google Earth website and confirmed that the specified project location information is correct. The CRA Project Team also verified these coordinates during the Site Visit. The project description details stated in Section A.2 of the PDD are accurate and complete, and are consistent with the observations made during the Site Visit. The CRA Project Team reviewed the PDD and confirmed the Project Participant provided a unique geographic reference for the proposed Project Activity.

The CRA Project Team raised CAR# 3 relating to the implementation of Project Activity:

Date:	26/08/2014	Raised by:	Vivek Kumar Ahirwar		
Type:	CAR	Number:	#3	Reference:	PDD, Section A.1, A.2 and A.3.
Lead Auditor Comment:					
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 CRA Project Team request that the Project Participant clarify the following:					
1.	The annual power generation by the project activity is not consistently mentioned in Section A.1 (9,899 MWh/year) and Section B.6.3 (10,139 MWh for one year). Please clarify.				
2.	Please provide the total GHG emission reductions for the chosen crediting period.				
3.	Project activity description in Section A.1 mentions that the project activity will displace electricity from the generation-mix of power plants connected to the Southern grid, however, further discussion mentioned that generated electricity will sell to third party. These are contradictory descriptions, please clarify.				
4.	Further elaborate the description in Scenario existing prior to the implementation of project activity and Baseline Scenario, as both discuss that project is grid-connected. Additionally, Section A.1 of the PDD states that the scenario existing prior to the implementation of the project activity is electricity delivered to the grid by the project activity. The scenario existing prior to the implementation of the project activity cannot involve electricity delivered to the grid by the project activity. The baseline for the proposed project activity is the scenario that reasonably represents the anthropogenic emissions by sources of GHGs that would occur in the absence of the proposed project activity. Please revise the PDD to specifically state how electricity is delivered to the grid in this case/area, including a description of the technology that would be employed and/or the activities that would take place in the absence of the proposed Project Activity.				

Date:	26/08/2014		Raised by:	Vivek Kumar Ahirwar		
Type:	CAR	Number:	#3	Reference:	PDD, Section A.1, A.2 and A.3.	
5.	The version of tool referred in Section A.1 is not provided.					
6.	The sectoral scope(s) and type of the project activity has not been mentioned in Section A.1 of the PDD.					
7.	The geographical coordinates of the project activity is not provided with the seconds values. If it is zero, please specify the same.					
8.	The Map does not clearly mentioned physical/geographical location of the project activity.					
9.	The list and the arrangement of the main manufacturing systems and equipment involved are not complete. The Project Participant is requested to provide the detailed description of equipments with rated capacity/specifications installed at site (e.g., PV modules, Inverters, etc.)					
10.	The location of monitoring equipment has not been mentioned in Section A.3 of the PDD.					
11.	The Project Participant has not provided the number of modules with respect to the individual capacity 235 Wp and 240 Wp PV modules in the description of the PDD Section A.3. In addition, the Project Participant has to confirm the 6 MWp total capacity of the project.					
12.	The version of tool is not mentioned in Section A.3 of the PDD.					
The Project Participants are requested to revise the PDD to include the required information.						
Project Participant Response:				Date: 16/09/2014		
1.	The annual power generation mentioned in Section A.1 is the average power for the renewable crediting period. The value mentioned in Section B.6.3 is the total electricity generated in the 1st year which is considered for sample emission reduction calculation.					
2.	The emission reduction value is already mentioned in Section A.1 of the revised PDD. The project will displace approx 9,535 tCO2 in the chosen 7 year renewable crediting period.					
3.	The project activity will supply power to Dr. Reddys Laboratory Limited under the PPA signed between M/s Arhyama and Dr. Reddys Laboratory. The sale of power is long term open access basis. Hence, the sale is to third party. Moreover, both pre-project scenario and baseline scenario mentions that electricity delivered to the grid which would otherwise be obtained from Grid. The southern grid is obviously the baseline and the project is connected to the grid however the sale is to third party.					
4.	The description provided in Section A.1 of the PDD is in accordance with the methodology. Moreover, description of the technology that would be employed has been described under Section A.3.					
5.	The Tool version is now mentioned in the revised PDD Version 2.0.					
6.	The sectoral scope and type is now updated in the revised PDD Version 2.0.					
7.	The solar plant is spread across approx. 35 acres. It is thus not appropriate to give a single point location for the plan in seconds. Accordingly, the location is mentioned in degrees and minutes while avoiding the seconds.					
8.	The map has now been revised.					
9.	The details are now mentioned in Section A.3 of the revised PDD Version 2.0.					
10.	The location detail of the monitoring equipment is already mentioned in Section B.3 of the PDD					
11.	The technical description is now mentioned in the revised PDD. Moreover, commissioning certificate is already submitted to the DOE which clearly mentions that the capacity of the project is 6 MW.					
12.	The version number of the tool is now updated in the revised PDD Version 2.0					

Date:	26/08/2014		Raised by:	Vivek Kumar Ahirwar	
Type:	CAR	Number:	#3	Reference:	PDD, Section A.1, A.2 and A.3.
Documentation Provided by Project Participant:					
PDD Version 2.0 dated 16/09/2014					
Information Verified by Lead Assessor:					
The CRA assessment team reviewed PDD Version 02, dated 16/09/2014, and the commission certificate, signed on 23 December 2013, and confirmed that the Project Participant clarified and addressed the listed items.					
Reasoning for Acceptance and Close Out:				Date: 19/11/2014	
The following summarizes CRA's review of the revised PDD Version 02:					
<ol style="list-style-type: none"> 1. The average power generation value is stated in Section A.1 of the PDD while the total power generation is mentioned in Section B.6.3. 2. The emission reduction value is stated in Section A.1 of the PDD. 3. The Power purchase agreement is signed between PP and Dr. Reddys Laboratory Limited. The connected grid is Southern regional grid. Hence the chosen baseline is correct and complies with the requirement of the applied methodology 4. The baseline was selected as per the applied methodology. In the absence of project activity the electricity would have been procured from the grid. 5. The Tools referenced by the methodology, and the corresponding version numbers, are now included in the revised PDD Version 02. 6. The sectoral scope and type are stated in the revised PDD Version 02 7. The provided geographical co-ordinates are found to be correct by the assessment team. The second avoidance is justified by the Project Participant and the same is acceptable to the assessment team. 8. The revised map, clearly depicting the physical/geographical location of the project activity, is now included in the revised PDD Version 02 9. The detail list of equipment is now included in the revised PDD Version 02. The equipment list was compared to equipment observed during the Site Visit, and no discrepancies were found. 10. The location detail of the monitoring equipment is included in the flow diagram in Section B.3 of the PDD 11. The commission certificate specifies the technical capacity of the project activity. The same is checked by the assessment team and found correct. 12. The version number of the tool is updated in the revise PDD Version 02 					
CAR #3 is Closed Out					
Acceptance and Close out by Lead Assessor:				Date: 19/11/2014	

The project falls under Type (I): Renewable Energy Projects, as the Project Activity involves generation of electricity using solar energy which is renewable energy, and Category D, Grid connected renewable electricity generation, as the generated electricity by the project will be supplied to the grid. Hence according to the simplified modalities and procedures for small-scale CDM project activities the type and category of the Project Activity has been correctly identified in the PDD.

During the Site Visit and through a document review of the purchase order for the solar panels, the CRA Project Team confirmed that the proposed Project Activity is a Greenfield project. The pre-project scenario and the baseline scenario for the project is that the electricity supplied to the grid by the Project Activity would otherwise have been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid. Thus, the Project Participant has described the scenario prior the implementation of the proposed CDM Project Activity, in accordance with Paragraph 38 of the Project Standard Version 07.0.

In order to confirm that there is no usage of public funding in the Project Activity; the CRA Project Team raised CL#1.

Date:	26/08/2014	Raised by:	Vivek Kumar Ahirwar		
Type:	CL	Number:	#1	Reference:	PDD, Section A.5.
Lead Auditor Comment:					
Paragraph 40 of the CDM Project Standard (Version 07.0) states: " <i>project participants shall provide information on sources of public funding for the proposed CDM Project Activity or PoA.</i> "					
The CRA 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: 16/09/2014	
The ODA document is now submitted to the DOE.					
Documentation Provided by Project Participant:					
ODA document dated 14/07/2014					
Information Verified by Lead Assessor:					
The CRA assessment team reviewed the ODA document, dated 14 July 2014, and confirmed the requirement of CDM Project Standard Paragraph 40 was met.					
Reasoning for Acceptance and Close Out:				Date: 19/11/2014	
ODA is checked by the assessment team and found correct.					
<u>CL #1 is Closed Out</u>					
Acceptance and Close out by Lead Assessor:				Date: 19/11/2014	

The Project Participant provided the CRA Project Team with a copy of a written declaration, dated 14 July 2014, confirming that the project will remain within the limits of a small scale project activity every year, for the entire crediting period and there is no usage of public funding in the Project Activity. Thus, the Project Participant complied with the requirement stipulated in Paragraph 40 of the Project Standard Version 07.0.

The CRA Project Team conducted a Site Visit and completed a document review to confirm that the description of the proposed CDM Project Activity specified in the PDD provides a clear understanding of the precise nature of the Project Activity and the technical aspects of its

implementation. Thus, the CRA Project Team confirms that the project description in the PDD is accurate and complete as per the requirements of Paragraph 65 of the VVS Version 07.0, and Paragraph 36 of the Project Standard Version 07.0. It is consistent and in compliance with the actual situation. All project details are consistent throughout the PDD.

4.5 Application of Baseline and Monitoring Methodology

As required by Paragraphs 71 through 73 of the VVS Version 07.0, CRA reviewed the baseline and monitoring methodology selected by the Project Participant to ensure that it complied with the methodology previously approved by the CDM EB. CRA validated the applicability of the selected Project Activity baseline and monitoring methodology through a document review including source data, and a Site Visit completed on 25 August 2014.

Version 17.0 of the applied methodology, AMS-I.D., was valid from 17 June 2011 to 27 November 2014. Requests for registration are permitted until 25 July 2015. The corresponding approved methodological tools and guidelines utilized throughout the PDD are:

- Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion, Version 02.
- Tool to calculate the emission factor for an electricity system, Version 04.0
- Guidelines on the demonstration of additionality of small-scale project activities, Version 09.0

Through CRA's review of the PDD, and the methodology referenced therein, CRA confirmed that the methodology selected by the Project Participant is the version approved by the EB.

The CRA Project Team raised CAR #4 to address the methodology applicability conditions:

Date:	26/08/2014	Raised by:	Vivek Kumar Ahirwar		
Type:	CAR	Number:	#4	Reference:	PDD, Section B.1 B.2
Lead Auditor Comment:					
In accordance with the "Technology/measure" of AMS I.D. (Version 17.0), the CRA Project Team request that the Project Participant clarify the following information mentioned in Section B.2 of the PDD (Version 1):					
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 Project Participant has discussed both options; please clarify which option was chosen for the Project Activity.				
2.	For Justification 02: The Project Participant is requested to justify how the 3rd option of Table 2 of AMS I.D. Version 17 is applicable for the Project Activity. Please provide supporting evidence for the same.				
3.	For Justification 03: The explanation for applicability condition 3 of the AMS I.D. Version 17 has not specified which option (e.g., a to d) is applicable to project activity. Please clarify.				

Date:	26/08/2014	Raised by:	Vivek Kumar Ahirwar		
Type:	CAR	Number:	#4	Reference:	PDD, Section B.1 B.2
Lead Auditor Comment:					
4.	For Justification 03: The explanation for applicability condition 3 of the AMS I.D. Version 17 referred to footnotes 3, 4, and 5, which are not included in the PDD. Please clarify.				
5.	For Justification 04: The justification provided for applicability condition 4 of the AMS I.D. Version 17 is not correct as justification does not specify whether condition 4 (for Hydro projects) of the AMS I.D. Version 17.0 applies to the project activity or not, please revise appropriately.				
6.	For Justification 04: The explanation for applicability condition 4 of the AMS I.D. Version 17 referred to footnotes 5 & 6, which are not included in the PDD. Please clarify.				
7.	For Justification 05: The justification provided for applicability condition 5 of the AMS I.D. Version 17 is not correct as justification does not specify whether condition 5 (for projects that have both renewable and non-renewable components) of the AMS I.D. Version 17 applies to the project activity or not, please revise appropriately.				
8.	For Justification 05: The explanation for applicability condition 5 of the AMS I.D. Version 17 referred to footnote 8, which is not included in the PDD. Please clarify.				
9.	For Justification 06: The justification provided for applicability condition 6 of the AMS I.D. Version 17 is not correct as justification does not specify whether condition 6 (Combined heat and power (co-generation) systems) of the AMS I.D. Version 17 applies to the project activity or not, please revise appropriately. (If it is not applicable, please specify the same clearly in the PDD.)				
10.	For Justification 07: The explanation for applicability condition 7 of the AMS I.D. Version 17 referred to footnote 9, which is not included in the PDD. Please clarify.				
Also, please provide exact references (i.e., document number, title, version number) for all tools referenced by the Methodology AMS I.D in Section B.1 of the PDD.					
The project diagram provided in Section B.3 of the PDD does not reflect the actual scenario of other project plants (not project activity) connected to the Southern Grid, the direction of the arrow appears to be wrong between Southern Grid and 'All power plants connected to grid'. Please clarify.					

Date:	26/08/2014	Raised by:	Vivek Kumar Ahirwar		
Type:	CAR	Number:	#4	Reference:	PDD, Section B.1 B.2
Lead Auditor Comment:					
Project Participant Response:				Date: 16/09/2014	
<ol style="list-style-type: none"> 1. The justification is now modified. 2. The PPA agreement for the open access sale is already provided to DOE. Thus 3rd option is applicable to the Justification 02. 3. Justification is now modified in the revised PDD Version 02. 4. Error is now rectified in the revise PDD Version 02 5. Justification is modified now 6. The error is modified now in the revised PDD Version 02 7. Justification is modified now 8. The error is modified now in the revised PDD Version 02 9. Justification is modified now 10. The error is modified now in the revised PDD Version 02 <p>All the tools referred by AMS.I. D is now mentioned in Section B.1 the revise PDD Version 02.</p> <p>The error in the project boundary is corrected in Section B.3 of the revise PDD Version 02.</p>					
Documentation Provided by Project Participant:					
PDD Version 2 dated 16/09/2014					
Information Verified by Lead Assessor:					
The CRA assessment team reviewed PDD Version 02 and confirmed that Section B of the document was revised to address the listed items.					
Reasoning for Acceptance and Close Out:				Date: 19/11/2014	
The CRA assessment team confirmed that the justification to all the methodological criteria is revised in the PDD Version 2. All the errors pertaining to applicability criteria were rectified.					
<u>CAR #4 is Closed Out</u>					
Acceptance and Close out by Lead Assessor:				Date: 19/11/2014	

PDD Section B.2 outlines applicability criteria for use of methodology AMS-I.D. Version 17.0 and the corresponding eligibility of the Project Activity. The CRA Project Team validated that the proposed Project Activity met the applicability criteria as stated within the methodology, included in the tables below.

No.	Applicability Criteria (AMS-I.D. Version 17.0.0)	Project Eligibility (DOE Remark)
1	<p>Paragraph 1 "This methodology comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass:</p> <p>(a) Supplying electricity to a national or a regional grid; or</p> <p>(b) Supplying electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling."</p>	The project activity comprises renewable energy generation unit of solar and thus complying with Para 1 (b) which is Supplying electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling. Hence the applicability criteria is met for the project activity
2	<p>Paragraph 2 – "Illustration of respective situations under which each of the methodology (i.e., AMS-I.D, AMS-I.F and AMS-I.A) applies is included in Table 2."</p>	The 3 rd option of Table 2 of AMS I.D. Version 17, EB 61 is applicable (please refer footnote) as project supplies electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling.
3	<p>Paragraph 3, "This methodology is applicable to project activities that (a) install a new power plant at a site where there was no renewable energy power plant operating prior to the implementation of the project activity (Greenfield plant); (b) involve a capacity addition; (c) involve a retrofit of (an) existing plant(s); or (d) involve a replacement of (an) existing plant(s)"</p>	The Project is a Greenfield project and thus falls under category (a). The same is confirmed during the Site Visit.
4	<p>Paragraph 4 – "Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology:</p> <p>a) The project activity is implemented in an existing 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>	This criterion is related to hydropower plants and hence not applicable to the Project Activity, which is related to Solar Power.
5	<p>Paragraph – 5, "If the new unit has both renewable and non-renewable components (e.g., a wind/diesel unit), the eligibility limit of 15 MW for a small-scale CDM project activity applies only to the renewable component. If the new unit co-fires fossil fuel, the capacity of the entire unit shall not exceed the limit of 15 MW."</p>	The Project Activity only has renewable components as confirmed in paragraph 1. The installed capacity of the project is 6 MW, which is less than the threshold of 15 MW for small-scale projects. The installed capacity was verified from the Commissioning certificate and the Site Visit.
6	<p>Paragraph – 6, "Combined heat and power (co-generation) systems are not eligible under this category."</p>	The project activity is a grid connected Solar power project and thus does not involve combined heat and power generation systems. This was verified during the Site Visit.

No.	Applicability Criteria (AMS-I.D. Version 17.0.0)	Project Eligibility (DOE Remark)
7	Paragraph – 7, <i>"In the case of project activities that involve the addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct from the existing units."</i>	This criterion is not applicable since the project is a Greenfield plant as discussed under Paragraph 3.
8	Paragraph - 8, <i>"In the case of retrofit or replacement, to qualify as a small-scale project, the total output of the retrofitted or replacement unit shall not exceed the limit of 15 MW."</i>	This criterion is not applicable since the project is a Greenfield plant as discussed under Paragraph 3.

The guidelines for the application of the methodology in the Project Activity were clearly included and correctly quoted and addressed in the PDD. The eligibility criteria included in the PDD is in accordance with the methodology and the tools. The versions of the methodology and the tools were valid at the time the PDD was submitted to CRA for webhosting purposes. CRA concluded the selected baseline and monitoring methodology are applicable to the Project Activity, and the Project Activity satisfies all relevant applicability conditions listed in the methodology.

Based on the completion of the on-site assessment, the CRA Project Team concluded that the methodology selected is applicable to the Project Activity, and that the Project Participant used the methodology appropriately.

4.5.1 Project Boundary

Paragraph 84 of VVS, Version 07.0, requires the DOE to:

determine whether all main GHG emission sources, the physical delineation of the proposed project activity and other relevant project and baseline emission sources covered in the methodology are included within the project boundary for the purpose of calculating project and baseline emissions for the proposed project activity.

As stated in Paragraph 9 of the AMS-I.D., Version 17.0.:

"The spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the CDM project power plant is connected to."

The CRA Project team reviewed the project location provided in the PDD, assessed the Site boundaries during the Site Visit, and questioned the developer of the proposed Project Activity facility.

Based on Site Visit assessment, the CRA Project Team observed that project boundary as mentioned in the revised PDD Version 3.0 is in accordance with the onsite practices. However, CAR#4, which was described earlier, and CAR #12 were raised regarding a diagram error of the project boundary. The same is rectified in the revised PDD Version 5.0, and thus the CARs are closed.

Date:	05/02/2015	Raised by:	Brent Boss		
Type:	CAR	Number:	#12	Reference:	PDD
Lead Auditor Comment:					
Following a peer review of the project documents, the Project Participant is requested to revise the PDD to address the following issues:					
<ul style="list-style-type: none">• The Project Boundary figure and description in Section B.3 of the PDD should be reviewed and revised if appropriate. Are all power plants that are connected to the Southern Grid part of the project activity?• The calculation of $EG_{\text{facility},y}$, total quantity of net electricity delivered to the Southern Grid (10,139 MWh) must be described in detail in the PDD in Sections B.6.1 and B.6.3. Detailed descriptions of all other parameter calculations are provided, with the exception of $EG_{\text{facility},y}$• Provide a reference and supporting documentation for the Plant Load Factor (PLF) of 19.29 percent, and update the PDD accordingly• The Project Participants provided the DOE with an emission reduction spreadsheet that details why the annual estimated emission reductions for each year of the crediting period are not consistently reported. However, the Project Participants must include a written explanation of the same (i.e., 0.8 percent degradation) in Section B.6.4 of the PDD as well.• Please specify in Section B.7.1 under the $EG_{\text{facility},y}$ parameter if the energy meters are bi-directional or if separate meters are used to measure electricity imported and electricity exported.• Please specify the calibration requirements for the meters described in Section B.7.1.					
Project Participant Response:				Date: 07/02/2015	
<ul style="list-style-type: none">• All power plants that are connected to the Southern Grid are not a part of the project activity. In accordance with Para 5.1 of AMS I.D Version 18.0, the figure under Section B.3 of the PDD depicts the entire project boundary, but it does not imply that all power plants that are connected to the Southern Grid are a part of the project activity.• The calculation of $EG_{\text{facility},y}$ is now described in detail in the PDD in Sections B.6.1 and B.6.3.• The Detailed Project Report giving the Plant Load Factor (PLF) of 19.29 percent has already been provided to the DOE for reference.• Explanation on why there is a consistent reduction in the annual estimated emission reductions for each year of the crediting period is now explained in Section B.6.4 of the PDD.• Bi-directional energy meters are used to measure electricity imported and electricity exported. The same is now explicitly mentioned in Section B.7.1 under the $EG_{\text{facility},y}$ parameter.• Section B.7.1 of the PDD specifically mentions that the calibration frequency of all the meters will be annual.					
Documentation Provided by Project Participant:					
PDD Version 4 dated 07/02/2015					

Date:	05/02/2015	Raised by:	Brent Boss		
Type:	CAR	Number:	#12	Reference:	PDD
Information Verified by Lead Assessor:					
<p>The CRA Project Team reviewed PDD Version 4, dated 7 February 2015.</p> <p>The Project Participant response indicates that the project boundary is shown in Section B.3 of the PDD, in accordance with the AMS I.D Version 18.0. The CRA Project Team notes that PDD Version 4.0 applies AMS I.D Version 17.0, not Version 18.0. The CRA Project Team assessed the project boundary against the definition provided in the applied methodology AMS I.D Version 17.0.</p> <p>Paragraph 9 of AMS-I.D Version 17.0 states "the spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system¹⁰ that the CDM project power plant is connected to".</p> <p>¹⁰ Refer to the latest approved version of the "Tool to calculate the emission factor for an electricity system" for definition of an electricity system.</p> <p>Paragraph 10(e) of the Tool to calculate the emission factor for an electricity system, Version 04.0 (Tool) defines a grid/project electricity system as the "spatial extent of the power plants that are physically connected through transmission and distribution lines to the project activity (e.g. the renewable power plant location or the consumers where electricity is being saved) and that can be dispatched without significant transmission constraints".</p> <p>The Project Boundary depicted in the Section B.3 of PDD Version 4.0 does not correspond to the definitions in the applied methodology and associated Tool.</p> <p>The detail regarding the Net electricity provided to the grid is detailed in the Sections B.6.1 and B.6.3 of PDD Version 4.0; however, the units stated in the equation are incorrect.</p> <p>The PLF reference is now included in the revised PDD.</p> <p>The PDD was revised to indicate that bi-directional meters are used onsite.</p> <p>The calibration frequency specified in PDD Version 4.0 does not match that listed in the Project Participant Response above.</p>					
Reasoning for Non-Acceptance and Close Out:				Date: 09/02/2015	

Date:	05/02/2015		Raised by:	Brent Boss	
Type:	CAR	Number:	#12	Reference:	PDD
Following are the CRA review on the replies regarding the issues raised:					
1. The Project Participant response indicates that the project boundary is shown in Section B.3 of the PDD, in accordance with the AMS I.D Version 18.0. The CRA Project Team notes that PDD Version 4.0 applies AMS I.D Version 17.0, not Version 18.0. The CRA Project Team assessed the project boundary against the definition provided in the applied methodology AMS I.D Version 17.0. Paragraph 9 of AMS-I.D Version 17.0 states "the spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system" ¹⁰ that the CDM project power plant is connected to". ¹⁰ Refer to the latest approved version of the "Tool to calculate the emission factor for an electricity system" for definition of an electricity system. Paragraph 10(e) of the Tool to calculate the emission factor for an electricity system, Version 04.0 (Tool) defines a grid/project electricity system as the "spatial extent of the power plants that are physically connected through transmission and distribution lines to the project activity (e.g., the renewable power plant location or the consumers where electricity is being saved) and that can be dispatched without significant transmission constraints". Based on the definitions contained in the applied methodology and associated Tool, the project boundary in Section B.3 of the PDD Version 4.0 is incorrect. The CRA Project Team requests that the Project Participant revise the project boundary depicted in the PDD.					
2. The detail calculation of $EG_{\text{facility},y}$ in Section B.6.1 and B.6.3 are now provided in the PDD Version 04. The CRA Project Team observed that the definition of BE_y references 'Annual operating days', when the value used is operating hours in a year (annual operating hours). The Project Participant is requested to correct the text in Section B.6.3 of the PDD.					
3. The Detailed Project Report is used as the source of data for emission reduction calculation. The CRA Project Team reviewed and confirmed the PLF value of 19.29 percent is listed in Annexure 3: Revenue & Cost Details and Annexure 6: BEP calculation of the Techno Economic Viability Study for Arhyama Solar Power Pvt. Ltd., prepared by Dun & Bradstreet Information Services India Private Limited (Detailed Project Report). The CRA Project Team confirmed that a footnote was added to Section B.6.3 of the PDD Version 4.0 to specify a source for the PLF value.					
4. The CRA Project Team confirmed a footnote was added to Section B.6.4 of the PDD Version 4.0. The Project Participant added footnote 3 which explains a 0.8 percent degradation was applied, which explains the inconsistent baseline emission values year over year. The CRA Project Team observes the text of the footnote would be more appropriately included in Section B.6.4 rather than as a footnote.					
5. The CRA Project Team confirmed that Section B.7.1 of the PDD Version 4.0 explicitly states that bi-directional meters are used onsite for the project activity.					
6. The calibration frequency for the meters is once in a five years which is national applicable standards for bidirectional meters. The specified calibration requirements in PDD Version 4.0 do not match with the Project Participant response provided above, which states calibration will be completed annually.					
<u>CAR #12 remains open.</u>					
Project Participant Response:				Date: 10/02/2015	

Date:	05/02/2015		Raised by:	Brent Boss	
Type:	CAR	Number:	#12	Reference:	PDD
<div>1. The project boundary has now been revised.</div> <div>2. Text in Section B.6.3 of the PDD has now been revised and the definition of BEy now references 'Annual operating hours ' instead of 'annual operating days'.</div> <div>4. The text of the footnote is now included in Section B.6.4 rather than as a footnote.</div> <div>6. The response provided above was incorrectly mentioned as annual calibration of meters. However, please note that calibration of all meters will be done once in 5 years in accordance with the CEA (Central Electricity Authority) requirements. The PDD already mentions that the calibration will be done once in 5 years.</div>					
Documentation Provided by Project Participant:					
PDD Version 5 dated 10/02/2015					
Information Verified by Lead Assessor:				Date: 10/02/2015	
The CRA project team assessed PDD Version 5 dated 10 February 2015 and confirmed					
<div>1. The Project boundary is now corrected in the revised PDD Version 5.0. The same is now in line with the applied methodology. The project boundary now depicts the spatial extent of the power plant connected to the grid. The same is now checked and found correct by the assessment team.</div> <div>2. Section B.6.3 was revised to correctly specify 'annual operating hours' in the BEy calculation in PDD Version 05 dated 10 February 2015.</div> <div>4. The degradation factor and reduction of emission reduction explanation now forms the part of the text in Section B.6.4 of the revised PDD Version 5.0.</div> <div>6. The calibration frequency is now corrected and consistent between the Project Participant responses and the PDD. The calibration will be done once every five years as per the national standards.</div>					
Reasoning for Acceptance and Close Out:				Date: 10/02/2015	
Based on the issues raised above, and the responses provided (which are summarized below), the finding was closed out.					
<div>1. The Project Boundary depicted in Section B.3 no longer includes all power plants connected to the Southern Grid, and is in accordance with the applied methodology, and applicable Tool. The revision in the PDD Version 05 dated 10 February 2015 is corrected.</div> <div>2. The annual operating days was a typographical error. The text in Section B.6.3 of PDD Version 5.0 is correct.</div> <div>4. The degradation factor and the reason for reduction of emission reduction year over year is now clearly stated in Section B.6.4 of the PDD, Version 5.0.</div> <div>6. The calibration frequency is once in a five year for bi-directional meters which is as per the national standard in the host country. Based on the Project Participant response dated 10 February 2015, the discrepancy noted in the revised PDD was due to an incorrect Project Participant response provided on 07 February 2015.</div>					
CAR#12 is Closed Out					
Acceptance and Close out by Lead Assessor:				Date: 10/02/2015	

The project boundary figure included in Section B.3 of the PDD Version 5.0 correctly describes the boundary.

The Project Participant described the project boundary in Section B.3 of the PDD and included the solar panels and metering equipment for each solar panel, transformer, sub-station, and the Southern regional grid of India. The energy metering is completed at metering point

installed at the substation of SEB, in accordance with the State Electricity Board tariff order and it is beyond the control of the Project Participant. This was verified through a physical inspection during the Site Visit.

The Project Participant included CO₂ in the calculation of the baseline. In the baseline scenario, electricity would have been produced at the Southern regional grid which in turn is connected to fossil fuel fired power plants that emit CO₂ and hence the inclusion of CO₂ in calculating the baseline is appropriate.

It is established, through the document review and Site Visit, that there are no additional greenhouse gas emissions occurring within the proposed CDM Project Activity boundary. Therefore, the implementation of the proposed CDM Project Activity would not result in emission sources that contribute more than 1 percent of the overall expected average annual emission reductions, and are not addressed by the applied methodology. The project is based on solar technology, so there are no emissions related to the Project Activity occurring within the project boundary. This is in accordance to Paragraph 89 of VVS, Version 07.0. The GHGs included in the boundary are as follows:

	Source	Gas	Included?	Justification/Explanation
Baseline	Grid electricity generation	CO ₂	Yes	Main source of emissions in the baseline
		CH ₄	No	Excluded for simplification. This is negligible.
		N ₂ O	No	Excluded for simplification. This is negligible.
Project Activity	Electricity generation from Wind Turbine Generators.	CO ₂	No	The Project Activity does not emit any CO ₂ emissions
		CH ₄	No	No methane generation is expected to be emitted.
		N ₂ O	No	No nitrous oxide generation is expected to be emitted.

The CRA Project Team conducted a Site Visit and completed a document review 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 84 of the VVS, Version 07.0.

4.5.2 Baseline Scenario Identification and Description

Paragraph 90 of the VVS, Version 07.0 requires the DOE to *"determine whether the baseline identified for the proposed project activity is the scenario that reasonably represents the*

anthropogenic emissions by sources of GHGs that would occur in the absence of the proposed project activity."

In accordance with Paragraph 10 of the AMS-I.D. Version 17.0, the Project Participant defined the baseline scenario in Section B.4 of the PDD:

"If the project activity is the installation of a new grid-connected renewable power plant/unit, the baseline scenario is the electricity delivered to the grid by the project activity that otherwise would have been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid."

The CRA Project Team reviewed the baseline scenario identified in the PDD against the procedures detailed in the approved methodology. The methodology criteria to identify the baseline emission scenario has been correctly quoted, applied, and adequately documented in the PDD. The identified baseline scenario is plausible based on local and sectoral knowledge.

Paragraph 122 of VVS Version 7.0 states, "Where the baseline scenario is prescribed in the approved methodology, no further analysis is required".

As the baseline scenario is prescribed in approved methodology AMS-I.D. Version 17.0, no further analysis was required.

Based on the above assessment as per Paragraphs 98 and 99 of the VVS Version 07.0, the CRA Project Team confirms that:

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

4.5.3 Algorithms and/or Formulae Used To Determine Emission Reductions

Paragraph 101 of the VVS Version 07.0 requires the DOE to:

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

The CRA Project Team reviewed the PDD and related documentation to validate that the steps taken and equations applied to calculations of the project emission, baseline emissions, leakage, and emission reductions comply with the selected baseline and monitoring methodology.

There are two tools that referenced in association with methodology AMS-I.D. Version 17.0:

- (i) Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion, Version 02.
- (ii) Tool to calculate emission factor for an electricity system, Version 04.0

The CRA Project Team compared the formulae and parameters used in the PDD against the required formulae and parameters listed in the applicable methodology and its associated tools. The PDD correctly applied the steps and equations to calculate baseline emissions and emission reductions as per the requirements of the applied methodology and referenced tools. The baseline emission, leakage, project emission, and emission reduction equations and parameters used in the PDD correspond with the applicable baseline scenario and equations.

The CRA Project Team verified and validated the assumptions, choice of data and parameters, references and sources, and values used in algorithms and formulae used to determine emission reductions in the PDD. The means of validation and opinions of the CRA Project Team are presented in the sections below.

Baseline Emissions

The baseline emissions were calculated in accordance with Paragraph 11 of the methodology AMS-I.D. Version 17.0:

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

$$BE_y = EG_{BL,y} \times EF_{grid,CM,y}$$

Where:

BE_y Baseline Emissions in year y (t CO₂)

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

$EF_{grid,CM,y}$ CO₂ emission factor of the grid in year y (t CO₂/MWh)

The baseline emissions equivalent in tCO_{2e} due to the project have been calculated as the product of the net electricity supplied to the grid and the grid emission factor as per the combined margin approach described in the "Tool to calculate the emission factor for an electricity system" (Version 04.0). The power produced will be exported to the Southern regional grid. Hence, the grid emission factor and the corresponding baseline emissions have been calculated for the Southern regional grid.

The Southern regional grid has been correctly identified for the calculation of electricity emission factor, as the project displaces electrical energy from Southern grid, as per the CEA database Version 09. In order to verify the appropriateness of baseline data used in estimation of emission reduction; the CRA team raised requested CAR#5 as follows:

Date:	26/08/2014	Raised by:	Vivek Kumar Ahirwar		
Type:	CAR	Number:	#5	Reference:	PDD, Section B.4
Lead Auditor Comment:					
In order to confirm that the Data Source used for calculation of grid emission factor is the latest available data at the time of PDD webhosting, the CRA Project Team request that the Project Participant specify the date of publication of CEA data for Grid Emission Factor in the table in Section B.4 of the PDD (Version 01).					
Project Participant Response:				Date: 16/09/2014	
The latest version of CEA database is mentioned in Section B.4 of the revise PDD Version 02					
Documentation Provided by Project Participant:					
PDD Version 2 dated 16/09/2014					
Information Verified by Lead Assessor:					
The CRA assessment team reviewed Section B.4 of PDD Version 02 and confirmed that the version of the CEA database is specified, and it is the latest available data at the time of PDD web-hosting.					
Reasoning for Acceptance and Close Out:				Date: 19/11/2014	
The latest version of CEA database was used for the project activity.					
<u>CAR #5 is Closed Out</u>					
Acceptance and Close out by Lead Assessor:				Date: 19/11/2014	

CEA database Version 09 was published by the Ministry of Power, Government of India on 27 January 2014, and it was the latest available version at the time of PDD webhosting for Global Stakeholder Comments. This is in compliance with the "Tool to calculate the emission

factor for an electricity system" (Version 04.0), which states that, "If the DNA of the host country has published a delineation of the project electricity system and connected electricity systems, these delineations should be used". Thus, the Project Participant has considered the regional grid that is delineated by the Central Electricity Authority of India, which was found to be correct and acceptable.

The emission factor has been calculated in accordance with Paragraph 12 (a) of the methodology AMS-I.D. Version 17.0:

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

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

The values of OM and BM have been determined ex-ante as per the CEA database Version 09. As per the "Tool to calculate the emission factor for an electricity system" (Version 04.0), "Regional or national average default values can be used for calculation of CO₂ Emission Factor if values are reliable and documented in regional or national energy statistics / energy balances". The CEA is the sole authority for publication of such data in India and hence the CRA Project Team accepted the CEA-source values.

The CRA Project Team verified that the following parameters are determined ex-ante:

Parameter	Value	Source	Means of validation
EF _{grid OM, y} = Operating Margin Emission Factor for Southern grid in year y	0.9633 tCO ₂ /MWh	Baseline Carbon Dioxide Emission Database Version 9.0 from the Central Electricity Authority Government of India website http://www.cea.nic.in/reports/planning/cdm_co2/cdm_co2.htm	Verified value against default value listed in CEA database Version 09 dated 27 January 2014

Parameter	Value	Source	Means of validation
EF _{grid BM, y} = Build Margin Emission Factor for Southern grid in year y	0.9675 tCO ₂ /MWh	Baseline Carbon Dioxide Emission Database Version 9.0 from the Central Electricity Authority Government of India website http://www.cea.nic.in/reports/planning/cdm_co2/cdm_co2.htm	Verified value against default value listed in CEA database Version 09 dated 27 January 2014
EF _{grid CM, y} = Combined Margin Emission Factor for Southern Grid in year y	0.9509 tCO ₂ /MWh	Calculated as the weighted average of the operating margin and build margin. Baseline Carbon Dioxide Emission Database Version 9.0 from the Central Electricity Authority website http://www.cea.nic.in/reports/planning/cdm_co2/cdm_co2.htm	verified value against calculation provided in the PDD.

The OM was determined based on the average of the previous 3 years values specified in the CEA database. The BM is considered directly from CEA database Version 09. The combined margin emission factor has been calculated by applying weights of 75 percent for OM and 25 percent for BM, as specified in the tool.

The baseline emissions for the Project Activity were calculated as the product of the net electricity supplied to the grid and the grid emission factor as per Paragraph 11 of AMS I.D. Version 17.0. The Project Participant rounded down the value of total baseline emissions, which is conservative.

Project Emissions

The Project Activity involves the generation of electricity using solar energy. Hence, there are no project emissions associated with this Project Activity as per Paragraphs 20 and 21 of AMS I.D. Version 17.0. Furthermore, based on Site Visit observations regarding the project site and boundary, no potential project emission sources have been identified.

Leakage

Leakage was not been considered for the Project Activity. According to Paragraph 22 of AMS I.D Version 17.0., if the energy generating equipment is transferred from another activity or if the existing equipment is transferred to another activity, leakage is to be considered. The proposed Project Activity uses new energy generating equipment, which the CRA Project Team verified from the purchase order. Thus, not considering leakage for the Project Activity is appropriate.

Emission Reductions

The emission reductions for the Project Activity were calculated as per Paragraph 23 of AMS I.D Version 17.0 as follows:

$$ER_y = BE_y - PE_y - LE_y$$

CAR #12, which was presented in Section 4.5.1 above, raised findings regarding units in the emission reduction calculation. CAR #7 was raised to clarify issues related to estimation of emission reductions as follows. The revision in PDD Versions 2.0 and 5.0 led to closure of the CARs.

Date:	26/08/2014	Raised by:	Vivek Kumar Ahirwar		
Type:	CAR	Number:	#7	Reference:	PDD Sections B.6.1, B.6.3 and B.6.5
Lead Auditor Comment:					
Paragraph 58 of the CDM Project Standard (Version 07.0) states:					
<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>					
In order to check the reproducibility of emission reduction and grid emission factor calculations; the CRA 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.					
Please note the submitted spread sheet was not for Project Activity, please clarify.					
Also, the PP is requested to clarify the following:					
1.	It is not clear why the Paragraph 3 of AMS I.D. Version 17 is discussed under Section B.6.1 of the PDD.				
2.	It is not clear why the discussion of combined margin /Baseline Emission factor (Southern Grid) is not provided in Section B.6.2 of the PDD.				
3.	It is not clear how the generated power of 10,139 MWh/annum for the Project Activity is calculated. Please provide supporting calculations of the same in Section B.6.3 of the PDD.				

Date:	26/08/2014	Raised by:	Vivek Kumar Ahirwar		
Type:	CAR	Number:	#7	Reference:	PDD Sections B.6.1, B.6.3 and B.6.5
4. It is not clear why the annual estimated emission reduction for each year is not consistently reported in Section B.6.4 of the PDD.					
Project Participant Response:				Date: 16/09/2014	
The emission reduction calculation is now submitted:					
1. The error is now omitted from the PDD Version 02					
2. The combined margin table is now introduced in the revise PDD Version 02					
3. The emission sheet is now provided to DOE					
4. The error is now modified in the revise PDD Version 02					
Documentation Provided by Project Participant:					
Emission Reduction Sheet PDD Version 2 dated 16/09/2014					
Information Verified by Lead Assessor:					
The CRA assessment team reviewed PDD Version 02 dated 16 September 2014, and the Emission Reduction spreadsheet, and confirmed that the listed items were addressed.					
Reasoning for Acceptance and Close Out:				Date: 19/11/2014	
Following is the review of CRA regarding the NC raised:					
<ul style="list-style-type: none"> Paragraph 3 is now removed from Section B.6.1 of the revised PDD Version 02. The Combined margin factor is now included in the revised PDD Version 02 The calculation forms the part of revised PDD Version 02 The annual estimation of emission reduction for each year is consistent in the revise PDD Version 02 					
<u>CAR #7 is Closed Out</u>					
Acceptance and Close out by Lead Assessor:				Date: 19/11/2014	

CAR#8 is also raised regarding a discrepancy in emission reduction calculation. The revision in the PDD Version 02 led to closure of the CAR.

Date:	26/08/2014	Raised by:	Vivek Kumar Ahirwar		
Type:	CAR	Number:	#8	Reference:	PDD, Section 7.0 and Appendix 5
Lead Auditor Comment:					
The Project Participant is requested to clarify the following in the Monitoring Plan specified in Section 7 of the PDD (Version 1):					
1. The estimated value of 9,899 MWh /yrs of $EG_{facility,y}$ is not consistent with the generated power value of 10,139 MWh/annum stated in the Section B.6.3 of the PDD.					
2. 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					

Date:	26/08/2014	Raised by:	Vivek Kumar Ahirwar		
Type:	CAR	Number:	#8	Reference:	PDD, Section 7.0 and Appendix 5
a CDM project activity is a "Project Participant". The CRA Project Team request that the PDD be revised accordingly.					
Project Participant Response:				Date: 16/09/2014	
1. As already explained average power is 9,899 MWh/year and 1st year generated power is 10,139 MWh/year					
2. The modification is done in the revise PDD Version 02					
Documentation Provided by Project Participant:					
PDD Version 2 dated 16/09/2014					
Information Verified by Lead Assessor:					
The CRA assessment team reviewed PDD Version 02 dated 16/09/2014, and confirmed that the listed items were addressed.					
Reasoning for Acceptance and Close Out:				Date: 19/11/2014	
Following is the review of CRA team:					
<ul style="list-style-type: none">The estimated emission reduction is now consistent in the revise PDD Version 02Project participant is now consistently used in the revised PDD Version 02					
<u>CAR #8 is Closed Out</u>					
Acceptance and Close out by Lead Assessor:				Date: 19/11/2014	

The CRA Project Team checked and confirmed all sources of data. The CRA Project Team reviewed the calculation spreadsheets and used a back-tracking calculation principle. This approach traces each parameter back to the source. Once used in the equations presented in the PDD, the calculations could be made in an independent manner from the spreadsheets provided by the Project Participant.

The data sources and assumptions used to determine emission reductions are appropriate and calculations are correct. The CRA Project Team ensured and confirmed through a review of the PDD and the associated methodology and tools that:

- 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 17.0. 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

4.5.3.1 Reduction of Anthropogenic Emissions of GHGS

As required by Paragraph 37(d) of the M&P, the Project Participant must demonstrate that the Project Activity was expected to result in a reduction in anthropogenic emissions by sources of GHGs that were additional to any that would occur in the absence of the proposed Project Activity.

Based on the desk review of emission sheet and PDD, the CRA Project Team confirmed that the Project Participant demonstrated that the Project Activity is expected to result in a reduction in anthropogenic emissions by sources of GHGs that are additional to any that would occur in the absence of the proposed Project Activity as previously discussed. Based on the values of baseline emissions, project emissions, and leakage, the annual average emission reductions have been calculated as 9,766 tCO₂/year.

4.5.4 Additionality of Project Activity

Paragraph 106 of the VVS, Version 07.0 requires the DOE to "determine whether the proposed Project Activity is additional as demonstrated in the PDD". The proposed CDM Project Activity demonstrates additionality as per the "Guidelines on the demonstration of additionality of small-scale project activities", Version 09.0.

The capacity of the project is 6 MWp (less than 15 MW) and hence it is considered as a small scale project activity. Therefore, in accordance with Section 28 of the simplified modalities and procedures for small-scale CDM project activities, the additionality of the project activity has been demonstrated using EB 68 Annex 27 (Version 9), Guidelines on the demonstration of additionality of small-scale Project activities. As all requirements specified in Section 28 of the simplified modalities and procedures are complied with by the project activity, this approach was assessed to be appropriate for the additionality assessment for this project activity.

As per EB 68 Annex 27 (Version 09), Guidelines on the demonstration of additionality of small-scale Project activities Paragraph 2, documentation of barriers is not required for the positive list of technologies and project activity types that are defined as automatically additional for project sizes up to and including the small-scale CDM thresholds (e.g., installed capacity up to 15 MW). The positive list comprises of:

- (a) The following grid-connected and off-grid renewable electricity generation technologies that are automatically defined as additional, without further documentation of barriers,

consists of the following grid-connected renewable electricity generation technologies of installed capacity up to 15 MW:

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

During the Site Visit and subsequent document review, the CRA assessment team confirmed that the project activity involves installation of 6 MW grid connected solar photovoltaic power plant in the state of Telengana. The CRA project team cross-checked the capacity of the project activity against the power purchase agreement, commissioning certificates, etc., which specify that the capacity of the project activity is 6 MW. Thus, the CRA Project Team confirmed that the capacity of the project is 6 MW.

Since the capacity of the project activity (6 MWp) is well within the limit of 15 MW, stipulated in EB 68 Annex 27 (Version 09.0), and the project is connected to Southern grid of India, the project is deemed additional without any further analysis.

Following CAR#6 was raised during the validation process and closed successfully.

Date:	26/08/2014	Raised by:	Vivek Kumar Ahirwar		
Type:	CAR	Number:	#6	Reference:	PDD, Section B.5
Lead Auditor Comment:					
Paragraph 33 of the CDM Project Standard (Version 07.0) states:					
<i>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.</i>					
The CRA Project Team request that the Project Participant clarify why the following requirements are not demonstrated in the Section B.5 of the PDD (Version 1):					
1. The PP has not provided the timeline for intimation sent to UNFCCC and DNA					
2. The PP has not provided the timeline for acknowledgment of intimation from UNFCCC and DNA					
3. The PP did not mention the start date of project activity					
The PP is requested to provide the above details in the PDD and provide supporting evidence.					
Project Participant Response:				Date: 16/09/2014	
The above details have already been provided in the PDD Version 01					

Date:	26/08/2014	Raised by:	Vivek Kumar Ahirwar		
Type:	CAR	Number:	#6	Reference:	PDD, Section B.5
Documentation Provided by Project Participant:					
None					
Information Verified by Lead Assessor:					
The CRA assessment team reviewed PDD Version 01 for required details related to CDM Project Standard Paragraph 33.					
Reasoning for Acceptance and Close Out:				Date: 19/11/2014	
The details regarding the prior consideration and start date of the project is already mentioned in the PDD Version 01.					
<u>CAR #6 is Closed Out</u>					
Acceptance and Close out by Lead Assessor:				Date: 19/11/2014	

4.5.5 Prior Consideration of the CDM

Paragraph 111 of the VVS, Version 07.0, requires the DOE to "determine whether CDM benefits were considered necessary in the decision to undertake the project as a proposed Project Activity if the starting date of the proposed Project Activity is prior to the start of validation, which is the date of publication of the PDD for global stakeholder consultation".

The start date of the proposed CDM Project Activity is 08 February 2013 which is after 2 August 2008 as per Paragraph 112 (a) of VVS Version 07.0. The start date is in accordance with the definition of start date specified in the latest version of "Glossary of CDM terms" Version 07.0. Moreover, as the start date is after 2 August 2008, prior notification needed to be sent to UNFCCC and NCDMA regarding the project activity within 180 days of project start date so that the CDM consideration is fulfilled.

The Project Participant sent prior consideration notification through an e-mail, dated 15 March 2013, to the UNFCCC and Indian DNA respectively, using the standardized prior consideration form. The forms contain a brief description of the proposed Project Activity and the precise geographical location of the Project Activity. The CRA Project Team confirmed from the UNFCCC web site that the notification (i.e., 15 March 2013, shown in the screen shot below) was made within 180 days of the Project Activity start date (i.e., 08 February 2013). This is found to be consistent with the requirements of Paragraph 113 VVS Version 07.0.

CDM: Prior Consideration of the CDM

cdm.unfccc.int/Projects/PriorCDM/notifications/index_html

Home | CDM | JH | CC:Net | TT:Clear

Your location: Home > Project Cycle Search > Prior Consideration

12:46 15 Oct 14

Prior Consideration of the CDM

Search Criteria

Date Received from: to:
* format DD/MM/YYYY

Host Party

Project Title

1

Displaying 1-1 of 1 notifications.

Project Title	Entity Name	Host Party	Date Received
Arhyama Solar based Photovoltaic Power Plant	Arhyama Solar Power Private Limited	India	15 Mar 2013

4.5.6 Common Practice Analysis

Paragraph 135 of VVS, Version 07.0 states:

For proposed large-scale project activities, unless the proposed project type is first-of-its-kind, as determined in accordance with the relevant guidelines, the DOE shall assess whether the project participants have conducted a common practice analysis.

The proposed Project Activity is a small-scale project, and therefore, Paragraph 135 of VVS, Version 07.0 is not applicable.

4.6 Investment Analysis

The project is automatically additional as per Paragraph 2 of EB 68 Annex 27 (Version 09.0), "Guidelines on the demonstration of additionality of small-scale project activities".

Hence, investment analysis is not required.

4.7 Monitoring Plan

As required by Paragraphs 138, 139, and 140 of the CDM VVS, Version 07.0, the PDD shall include a monitoring plan, which must meet the following requirements:

- Comply with the appropriate methodologies
- Be implementable (i.e., feasible within the project design) and verifiable

- Ability to implement the described monitoring plan.

Following CAR#11 was raised during the validation process and the revision in the PDD Version 3.0 led to the closure of CAR#11.

Date:	09/01/2015	Raised by:	Sukanta Das		
Type:	CAR	Number:	#11	Reference:	PDD, Section B.7
Lead Auditor Comment:					
In due course of validation and document verification it was observed that the monitoring as mentioned in the revised PDD Version 02 dated 16 September 2014 is not as per the onsite practice.					
Moreover, the detail regarding the losses is also not clearly mentioned in the PDD. Corrective action is sought in this regard.					
Project Participant Response:				Date: 09/01/2015	
Section B.7.2 of the PDD has now been revised as per the onsite practice. Moreover, calculation of net electricity supplied to the grid has now been explained transparently. Also, Wheeling Loss has now been added as a parameter under Section B.7.1.					
Documentation Provided by Project Participant:					
PDD Version 3 dated 09/01/2015					
Information Verified by Lead Assessor:					
The CRA Project Team reviewed PDD Version 3, dated 9 January 2015, and confirmed that the monitoring stated in the document matches onsite practice. As well, the CRA Project Team confirmed that losses are clearly described in the PDD.					
Reasoning for Acceptance and Close Out:				Date: 09/01/2015	
The monitoring practice onsite is now revised in the PDD Version 03. The net electricity supplied to the grid is calculated by the state electricity board by using the export and import value. The state board then issues the energy settlement report to the project participant mentioning the net electricity supplied and the same settlement report will be used for the emission reduction calculation. Net electricity supplied as mentioned in energy settlement report can be cross checked with the invoices. The same is in line with the methodology.					
The calculation of net electricity is not in the control of the PP. Moreover, the wheeling loss is deducted from the generated value; at present 3.99 percent is used. The wheeling loss is considered as the monitoring parameter and the loss during verification will be considered for emission reduction calculation. The wheeling loss value also forms the part of energy settlement report prepared by the state electricity board.					
<u>CAR #11 is Closed Out</u>					
Acceptance and Close out by Lead Assessor:				Date: 09/01/2015	

Determination of the baseline project parameters is detailed in Section B.7 of the PDD. The CRA Project Team assessed the baseline parameters against methodology AMS-I.D., Version 17.0, and the associated tools "Tool to calculate the emission factor for an electricity system", Version 04.0. The following associated monitoring parameter ($EG_{facility,y}$) is presented in Section B.7.1 of the PDD, as per the requirements of Paragraph 24 of the methodology AMS I.D Version 17.0:

$EG_{\text{facility},y}$ refers to the "Quantity of Net Electricity supplied by the project activity to the grid during the year y". This parameter is calculated as based on the difference between measured values of "export" and "import" electricity at the Main/Check/stand by meter installed at the substation. The source of the net electricity is the energy settlement report issued by the state electricity board officials. The invoice is then raised by state board as per the net value mentioned in the energy settlement report. This is found to be in accordance with monitoring requirement stipulated in the methodology AMS I.D Version 17.0.

The Project Activity has dedicated meters and this was confirmed during the Site Visit. However, the Net electricity would be claimed based on the Energy settlement report value which is allowed by AMS.I.D. Thus, the monitoring procedure is acceptable to the CRA team.

The Project Participant stated that all the monitored data would be archived electronically and on paper daily throughout the crediting period. Data will be archived for a minimum of 2 years after the end of the crediting period, as stated in Section B.7.1 of the PDD. Thus, the monitoring plan is in compliance with the requirements of Paragraph 24 of the methodology AMS I.D. Version 17.0.

The monitoring plan in Section B.7.3 of the PDD clearly states the operating structure; apportioning procedure, testing and calibration procedures, QA/QC procedures, specifications of the metering equipment, procedures in case of data uncertainty, data reporting & archiving, staff training, and the management structure. The CRA Project Team cross-checked these details during the Site Visit, and identified no discrepancies.

The CRA Project Team physically assessed the metering and monitoring systems during the Site Visit of the sub-station. The representatives of the O&M team and the SEB officials were interviewed to verify the correctness of the procedure mentioned in the PDD. The CRA Project Team confirmed that the description in the PDD correctly presents the metering system available at the Project Activity site and that the defined monitoring plan can be implemented.

The CRA Project Team confirmed, during the Site Visit and stakeholder interviews, that the project does not involve any sampling in the monitoring of Project Activity parameters; hence Section B.7.2 is not applicable for this Project Activity.

The Project Participant specified the data management and quality control/quality assurance procedures within the PDD.

Through the CRA Project Team's review of the documented procedures within the PDD, interviews with relevant personnel, project plans, and a physical inspection of the proposed CDM Project Site, the CRA Project Team determined that:

- (i) The monitoring arrangements described in the monitoring plan are feasible within the project design.
- (ii) The means of implementation of the monitoring plan, including the data management and quality assurance and quality control procedures, are sufficient to ensure that the emission reductions achieved by/resulting from the proposed Project Activity can be reported ex post and verified.
- (iii) The O&M service provider is an ISO 9001, 14001 and an Occupational Health and Safety (OHSAS) 18001 certified organization with an experience in monitoring and managing the O&M of numerous other CDM solar power projects. The CRA Project Team is therefore 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.

4.8 Environmental Impact Analysis/Assessment

Paragraph 141 of the VVS Version 07.0 requires the DOE to "determine whether the project participants conducted an analysis of the environmental impacts of the proposed Project Activity, including transboundary impacts, and whether those impacts are considered significant by the project participants or the host Party".

Paragraph 142 of the VVS Version 07.0 requires the DOE to also "determine whether the project participants conducted an environmental impact assessment, if required to do so by the host Party, in accordance with the host Party's procedures".

Section D.1 of the PDD states that "the project will not involve any negative environmental impacts, as the plant is installed for generation of power using solar energy which is a clean source of energy, thus no EIA study was required".

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 project do not require a prior environmental clearance, and an EIA is not required.

The CRA Project Team completed a review of the documents stated above and confirms that the proposed Project Activity complies with environmental regulations in India.

4.10 Conformation with All Other CDM Requirements

The CRA Project Team confirmed through the validation process that the proposed Project Activity conforms to all other CDM requirements including those stated in Paragraph 37(g) of the M&P as follows:

- (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 CRA Project Team reviewed all applicable decisions by the COP/MOP as well as decisions made by the UNFCCC. These have included the description of the project and the start date of the project. The project description was reviewed during the on-site assessment after reviewing the PDD. The description of the project was deemed to be correct and transparent.

Section 5.0 Conclusions, Final Comments, and Validation Opinion

Arhyama Solar Power Pvt. Ltd commissioned CRA to complete an independent third party validation of GHG emission offsets associated with the proposed CDM Project Activity.

As stated in Section 1.3, CRA, as a DOE, is responsible for reviewing the PDD and any supporting documentation to ensure that the requirements of Paragraph 37 of the M&P are met, specifically that:

- a) The participation requirements as set out in paragraphs 28 to 30[of the CDM M&P⁵] are satisfied*

The participation requirements for the Project Participant involved in this process have been confirmed based on the letter of approval.

⁵ 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.

- 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*

Local stakeholders comments were invited, received and responded to correctly as per the Local Stakeholders meeting minutes and other documentation provided by the Project Participant as per UNFCCC guidance (Detailed information provided in Section 3.1 as above). The CRA Project Team's interviews with a number of local stakeholders confirmed the same.

- c) *Project participants have submitted to the designated operational entity documentation on the analysis of the environmental impacts of the project activity, including transboundary 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*

The Project Activity complies with environmental regulations in India. EIA assessment is not required as per the Host country criteria.

- 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 below;*

Additionality for the proposed project activity has been proven to result in a reduction of anthropogenic emission of GHG sources that are additional to the baseline scenario. Additionality for the proposed project activity was confirmed by CRA based on the eligibility requirements related to additionality, as defined in the PDD.

- 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 below*

The Project Participant used approved methodology AMS- I.D. Version 17.0 for the proposed Project Activity.

- 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*

The monitoring plans established by the Project Participant cover all required items as stated within the methodology and applicable methodological tools. The monitoring plan for the proposed specific Project Activity has also been deemed to be implementable based on the on-site assessments.

As indicated in Section 4.0, the CRA 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.

Validation Opinion

The validation was performed in accordance with the UNFCCC criteria for the CDM, Validation and Verification Standard, Version 07.0, relevant decisions from the COP/MOP and/or the CDM Executive Board, and host country criteria.

Through installation of a grid connected 6 MW solar power project in Telengana, 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 CRA's opinion that all relevant CDM and host country criteria have been satisfied. The PDD properly applies the criteria of AMS - I.D. Version 17.0. Within the PDD, it was demonstrated and confirmed by the CRA Project Team that proposed Project Activity is not a likely baseline scenario. Therefore, it is CRA'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 findings raised by the CRA Project Team have been satisfactorily resolved by the Project Participant.

In total, the emission reductions from the Project Activity are estimated to be 9,535 tonnes of CO₂e/ annum over a 7-year crediting period. The estimated emission reductions have been reviewed by the CRA Project Team for completeness, accuracy, and consistency. At the conclusion of this review, CRA 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, CRA is issuing a positive Validation Opinion in regards to Project Activity and therefore recommends the Project Activity for registration with the UNFCCC.

Appendix A

Validation Protocol

CDM Validation Checklist
Conestoga-Rovers & Associates Limited

Participation Requirements		Comments
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 26th August 2002. India is allowed to take part in the CDM Projects. Host Party is India. Section 4.2 of the Validation Report confirms this requirement.
The host Party has designated a national authority for the CDM.	<input checked="" type="checkbox"/>	Host Party DNA as per the UNFCCC website is: http://maindb.unfccc.int/public/country.pl?country=IN
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 4.2 provides details within the Validation Report.
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 being submitted for registration? Did the DOE receive the LoA from the Project Participants or directly from the DNA?	<input checked="" type="checkbox"/>	Section 4.2 of the Validation Report confirms this requirement.
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
The information regarding the Project Participants that is listed in tabular form in the PDD is consistent with the information provided in the section that contains the contact information for the Project Participants. No other entities other than those authorized as Project Participants are included in these sections of the PDD.	<input checked="" type="checkbox"/>	Yes, all information correctly provided. Section 4.2 provides the detail regarding the project participant

Participation Requirements		Comments
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.
Baseline Methodology	<input checked="" type="checkbox"/>	The Project has used the previously approved Small Scale CDM baseline methodology AMS-I.D (Version 17.0) "Grid connected renewable electricity generation". The Project Participants successfully closed out all findings related to this matter.
Duration of the Project Activity/Crediting Period	<input checked="" type="checkbox"/>	The start date of project activity is 8 February 2013, which corresponds to the purchase order date. The operational lifetime of project activity is 25 years as per manufacturer specification. Both dates are stated in Sections C.1 and C.2, respectively, of the PDD. The Project Participant successfully closed out all findings related to this matter.
Monitoring Methodology and Plan	<input checked="" type="checkbox"/>	The monitored parameters mentioned in 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 Participants successfully closed out all findings related to this matter.
Calculation of GHG emission reductions, using conservative assumptions for estimating emission reductions	<input checked="" type="checkbox"/>	Calculation spreadsheets were provided to CRA upon request in the findings assessment. In all instances, conservative values were used.

Participation Requirements		Comments
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.
Local Stakeholder Comments	<input checked="" type="checkbox"/>	The local stakeholder consultation process has been satisfactorily carried out. The Project Participants successfully closed out all findings related to this matter.
(2) Ensure the PDD meets the following criteria:		
The documentation is complete and comprehensive and follows the structure and criteria given in the CDM template.	<input checked="" type="checkbox"/>	The CRA Project Team has confirmed that the content of each section of the PDD is as per UNFCCC guidelines.
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 17.0) "Grid connected renewable electricity generation". AMS-I.D (Version 17.0) is appropriate for the proposed Project Activity.
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.
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 5.0.
Additionality of the project is sufficiently demonstrated in the PDD.	<input checked="" type="checkbox"/>	Section 4.5.4 provides details within the Validation Report.

Participation Requirements		Comments
All aspects related to direct and indirect emissions, including leakage, are captured in the PDD and potentially claimed emission reductions.	<input checked="" type="checkbox"/>	All sources of emissions were confirmed during the Site visit and through the review of the Emission Reduction Spreadsheets.
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.
Local stakeholder consultation has been carried out and comments are taken into account in the project design.	<input checked="" type="checkbox"/>	Section 3 of the Validation Report presents the details of the stakeholder consultations. The details of the validation of the local stakeholder consultation are provided in Section 4.3.
The technical features of the project, as well as other information about the project, have been sufficiently addressed.	<input checked="" type="checkbox"/>	CRA's Technical Review in conjunction with the Site Visit has confirmed that all technical information as required is included in the PDD and supporting information.
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 4.7 of the Validation Report presents the details of the Monitoring Plan review completed by CRA. The Monitoring Plan is in compliance with the methodology and tools and onsite practices
(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
Global Stakeholder Consultation		
(1) Post PDD on UNFCCC Website for a period of 30 days to receive global stakeholder comments and include the following:		Posted on UNFCCC website between 24 July 2014 to 22 August 2014
The name of the proposed CDM project activity or programme of activities.	<input checked="" type="checkbox"/>	The title of project activity is "6 MW Solar Power Project by Arhyama Solar Power"
The Host Party/ies of the proposed CDM project activity or programme of activities.	<input checked="" type="checkbox"/>	India

Participation Requirements		Comments
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.	<input checked="" type="checkbox"/>	The Annual emission reduction is made available in the PDD version 01. The annual estimate is 9,535 tCO ₂ / annum
The approved methodology/ies being applied by the proposed CDM project activity or programme of activities.	<input checked="" type="checkbox"/>	AMS-I.D. "Grid connected renewable electricity generation" --- Version 17.0
Reference to any previous publication of the PoA-DD and CPA-DD for public comments on the UNFCCC CDM website.	<input checked="" type="checkbox"/>	No previous publications of the PDD
The proposed start date and length of the first crediting period.	<input checked="" type="checkbox"/>	13/02/2015 or Date of submission of complete request for registration by the DOE whichever is later.
The PDD.	<input checked="" type="checkbox"/>	PDD was posted on the UNFCCC webpage for a period of 30 days (24 July 2014 to 22 August 2014). No comments received
Project Description and Site Visit		
(1) Has the Project Proponent provided a clear definition of the project activity enabling understanding of the precise nature of the project activity and the technical aspects of implementation?	<input checked="" type="checkbox"/>	The definitions of the Project Activity within the PDD were sufficient such that during the Site Visit the CRA Project Team was able to confirm all aspects as stated in the PDD. Section 1.2 of the Validation Report provides details.
(2) If the proposed CDM project activity involves the alteration of an existing installation or process, ensure that the project description clearly states the differences resulting from the project activity compared to the pre-project situation.	<input type="checkbox"/>	N/A There is no existing installation or process at the proposed project activity site.
(3) Site Visit has been completed if any of the following apply:	<input checked="" type="checkbox"/>	Site Visit conducted on 25 August 2014. Details of interviews in Section 2.3 of the Validation Report.
Large Scale Project.	<input checked="" type="checkbox"/>	N/A
Non-bundled small scale projects with emission reductions exceeding 15,000 tonnes per year.	<input type="checkbox"/>	N/A

Participation Requirements		Comments
Bundled small scale projects, each with emission reductions not exceeding 15,000 tonnes per year; in such case the number of physical site visits may, however, be based on sampling, if the sampling size is appropriately justified through statistical analysis.	<input type="checkbox"/>	N/A
(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 type="checkbox"/>	N/A
(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"/>	N/A

Participation Requirements		Comments
Baseline and Monitoring Methodology Review		
(1) Is the selected methodology applicable to the project activity?	<input checked="" type="checkbox"/>	<p>PDD Section B.2 outlines applicability criteria for use of methodology AMS-I.D. Version 17.0 and the corresponding eligibility of the project activity. The CRA Project Team has validated that the proposed Project Activity meet the all applicability criteria.</p> <p>The AMS I.D. version 17.0 is appropriate for the proposed project activity.</p> <p>CAR#4 was raised as the Project Participant needs to clarify the some issue on information mentioned in section B.1 of the PDD. Based on the findings raised and the modifications of Section B.1 in the updated PDD provided by the Project Participant, the CAR#4 is closed out.</p>
Does the project activity meet each of the applicability conditions of the approved methodology or any tool or other methodology component referred to therein?	<input checked="" type="checkbox"/>	Section 4.5 of the Validation Report confirms this requirement.
Have the Project Participants 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 Participants 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 type="checkbox"/>	N/A

Participation Requirements		Comments
(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.	☒	The PDD present figures and descriptions of the delineation between the baseline scenario and the Project Activity.
Have all sources and GHGs required by the methodology been included within the project boundary. If the methodology allows project participants to choose whether a source or gas is to be included within the project boundary, determine whether the project participants have justified that choice. Confirm that the justification provided is reasonable, based on assessment of supporting documented evidence provided by the project participants and corroborated by observations if required.	☒	All sources and GHGs required by AMS-I.D., Version 17.0 are included within the project boundary and are detailed in Section B.3 of the PDD. CAR#4 was raised as the project boundary was not described properly in the PDD version 1.0. The PP carried out required revision in the PDD and thus the CAR is deemed closed.
(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?	☒	Baseline assessment is presented throughout Section B.4 of the PDD.

Participation Requirements		Comments
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"/>	Several findings were raised within the Validation Report regarding the proper selection of the baseline scenario. All findings based on the Project Participant responses and supporting documentation were Closed Out as detailed in Section 4.5.2 of the Validation Report.
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 participants 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"/>	Section 4.5.2 of the Validation Report addresses baseline scenario identification.
Determine whether the 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"/>	Same as per above also requested calculations and clarifications on alternatives to the Project Activity. All assumptions have been validated.
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, CRA reviewed the sources and confirmed their validity.

Participation Requirements		Comments
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"/>	The laws/regulations reviewed by CRA are discussed in the Validation Report.
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"/>	Baseline scenario was identified in the PDD was verified during the Site Visit by CRA.
(4) Has the selected methodology been correctly applied by the following with respect to the Algorithms and/or Formulae used :		
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 CRA 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 Sections 4.5.3 of the Validation Report.
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, CRA reviewed the calculations and their transference to the PDD. In all cases CRA confirms that they have been applied correctly according to the applicable methodologies. Section 4.5.3 of the Validation Report confirms this requirement.
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, and are presented in Section 4.5.3 of the Validation Report.

Participation Requirements		Comments
<p>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.</p>	<input checked="" type="checkbox"/>	<p>The Project Participant selected values for grid emission factor from Baseline Carbon Dioxide Emission Database Version 9.0, (Dated: 27th January 2014) from the Central Electricity Authority, Government of India. http://www.cea.nic.in/reports/planning/cdm_co2/cdm_co2.htm</p> <p>The DOE opinion for algorithms and formulae used to determine emission reductions is in Section 4.5.3 of the Validation Report</p>

Participation Requirements		Comments
ADDITIONALITY		
(1) 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"/>	The Project Participant sent prior consideration notification through an e-mail dated 15 March 2013, the notifications to the UNFCCC and Indian DNA respectively, have been sent using the standardised prior consideration form by the Project Participant.
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"/>	CRA confirmed it has been reported correctly.
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"/>	Start date is after 2 August 2008. Therefore it is a new Project Activity.

Participation Requirements		Comments
<p>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 participants within six months of the project activity start date, the CDM was not seriously considered in the decision to implement the project activity.</p>	<input checked="" type="checkbox"/>	<p>The Project Participant sent prior consideration notification through an e-mail dated 15 March 2013, the notifications to the UNFCCC and Indian DNA respectively, have been sent using the standardized prior consideration form by the Project Participant.</p> <p>In line with the guidance, Arhyama Solar Power Pvt. Ltd. intimated 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 on 15th March 2013, which is within six months of the project activity start date (as mentioned in section C.1.1 of the PDD). Hence from the above it can be clearly established that CDM was seriously considered in the decision to proceed with the proposed project activity.</p>

Participation Requirements		Comments
<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 participants 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 participants 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</p>	<input type="checkbox"/>	<p>N/A</p>

Participation Requirements		Comments
newspaper, interviews with DNA, earlier correspondence on the project with the DNA or the UNFCCC secretariat.		
(2) Assess that the selected methodology been correctly applied by completing the following with respect to Identification of Alternatives:		
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 ; baseline is selected as per AMS I D. Version 17.0
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 17.0 with sufficient justifications as detailed in the Validation Report.
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.
(3) Assess that the selected methodology been correctly applied by completing the following with respect to Investment Analysis:		
<p>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:</p> <p>(a) The most economically or financially attractive alternative.</p> <p>(b) Economically or financially feasible, without the revenue from the sale of certified emission reductions (CERs).</p>	<input checked="" type="checkbox"/>	NA

Participation Requirements		Comments
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"/>	NA
The proposed CDM project activity is less economically or financially attractive than at least one other credible and realistic alternative.	<input checked="" type="checkbox"/>	NA
The financial returns of the proposed CDM project activity would be insufficient to justify the required investment.	<input checked="" type="checkbox"/>	NA
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"/>	NA
Cross-check the parameters against third-party or publicly available sources, such as invoices or price indices.	<input checked="" type="checkbox"/>	NA
Review feasibility reports, public announcements and annual financial reports related to the proposed CDM project activity and the project participants.	<input checked="" type="checkbox"/>	NA
Assess the correctness of computations carried out and documented by the project participants.	<input checked="" type="checkbox"/>	

Participation Requirements		Comments
Assess the sensitivity analysis by the project participants to determine under what conditions variations in the result would occur, and the likelihood of these conditions.	<input checked="" type="checkbox"/>	NA
Determine whether the type of benchmark applied is suitable for the type of financial indicator presented.	<input checked="" type="checkbox"/>	NA
Ensure that any risk premiums applied in determining the benchmark reflect the risks associated with the project type or activity.	<input checked="" type="checkbox"/>	N/A
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 participants 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"/>	NA
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"/>	NA
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"/>	N/A

Participation Requirements		Comments
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"/>	N/A
(4) 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 type="checkbox"/>	N/A
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.	<input type="checkbox"/>	N/A

Participation Requirements		Comments
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.	<input type="checkbox"/>	N/A
(5) Assess that the selected methodology been correctly applied by completing the following with respect to Common Practice Analysis :		
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.	<input type="checkbox"/>	N/A
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.	<input type="checkbox"/>	N/A

Participation Requirements		Comments
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 type="checkbox"/>	N/A
MONITORING PLAN		
(1) Compliance of the monitoring plan with the approved methodology:		
By means of document review. Identify the list of parameters required by the selected approved methodology.	<input checked="" type="checkbox"/>	Monitoring parameters have been confirmed against the requirements of the applicable methodologies and associated tools, and are detailed in Section 4.7 of the Validation Report.
Confirm that the monitoring plan contains all necessary parameters, that they are clearly described and that the means of monitoring described in the plan complies with the requirements of the methodology.	<input checked="" type="checkbox"/>	Confirmed. The detail is provided in section 4.7 of the Validation report.
(2) Review of the documented procedures, interviews with relevant personnel, project plans and any physical inspection of the proposed CDM project activity site to assess whether:		
The monitoring arrangements described in the monitoring plan are feasible within the project design.	<input checked="" type="checkbox"/>	Monitoring arrangements were viewed during the Site Visit and are deemed feasible based on CRA's experience with design and operation of similar monitoring systems.
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 can be reported ex post and verified.	<input checked="" type="checkbox"/>	Confirmed as per the above.

Participation Requirements		Comments
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 to the sustainable development of the host Party. Did the DOE receive the letter of approval from the Project Participants or directly from the DNA of the host Party?	<input checked="" type="checkbox"/>	Letter of Approval from the DNA confirmed the Project Activity and its contribution to sustainable development. The details are provided in the validation report
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"/>	The details are provided in Section 4.3 of the validation report
The summary of the comments received as provided in the PDD is complete.	<input checked="" type="checkbox"/>	The list is complete in the PDD. Sections 3 and 4.3 of the Validation Report confirm this requirement.
The project participants have taken due account of any comments received and have described this process in the PDD.	<input checked="" type="checkbox"/>	All comments were basic in nature and answered at the meeting. Sections 3.5 and 4.3 of the Validation Report confirm this requirement.
ENVIRONMENTAL IMPACTS		
(1) Confirm, by means of a document review and/or using local official sources and expertise, whether the project participants have undertaken an analysis of environmental impacts and, if required by the host Party, an environmental impact assessment.	<input checked="" type="checkbox"/>	The evaluation of environmental impacts is presented in Section 4.8 of the Validation Report.

Participation Requirements		Comments
Validation Report		
(1) The Validation Report shall include all of the following:		
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). 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.	<input checked="" type="checkbox"/>	Section 4.5.1 of the Validation Report details the evaluation and validation of the project boundary.
(2) Provide an opinion as to whether:		
All the assumptions and data used by the project participants are listed in the PDD, including their references and sources.	<input checked="" type="checkbox"/>	Section 4.5.2 of the Validation Report confirms this Requirement.
All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the PDD.	<input checked="" type="checkbox"/>	Section 4.5.2 of the Validation Report confirms this Requirement.
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"/>	Section 4.5.2 of the Validation Report confirms this Requirement.
Relevant national and/or sectoral policies and circumstances are considered and listed in the PDD.	<input checked="" type="checkbox"/>	Section 4.5.2 of the Validation Report confirms this Requirement.

Participation Requirements		Comments
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"/>	Section 4.5.2 of the Validation Report confirms this Requirement.
(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 participants are listed in the PDD, including their references and sources.	<input checked="" type="checkbox"/>	Section 4.5.3 of the Validation Report confirms this requirement.
All documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PDD.	<input checked="" type="checkbox"/>	Section 4.5.3 of the Validation Report confirms this requirement.
All values used in the PDD are considered reasonable in the context of the proposed CDM project activity.	<input checked="" type="checkbox"/>	Section 4.5.3 of the Validation Report confirms this requirement.
The baseline methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions.	<input checked="" type="checkbox"/>	Section 4.5.3 of the Validation Report confirms this requirement.
All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PDD.	<input checked="" type="checkbox"/>	Section 4.5.3 of the Validation Report confirms this requirement.
(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"/>	Government/referenced sources for information were used throughout the PDD.
(5) The validation report shall describe the following with respect to the consideration of CDM:		

Participation Requirements		Comments
Describe the validation of the project activity start date provided in the PDD.	<input checked="" type="checkbox"/>	Sections 2.3 and 5.0 of the Validation Report.
Describe the evidence for prior consideration of the CDM (if necessary) that was assessed.	<input checked="" type="checkbox"/>	Section 4.5.5 of the Validation Report.
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"/>	Section 4.5.5 of the Validation Report.
(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"/>	Section 4.6 of the Validation Report.
Describe how the suitability of any benchmark applied has been assessed.	<input checked="" type="checkbox"/>	Section 4.6 of the Validation Report.
Confirm whether the underlying assumptions are appropriate and the financial calculations are correct.	<input checked="" type="checkbox"/>	Section 4.6 of the Validation Report.
(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 type="checkbox"/>	N/A
Provide an overall determination of the credibility of the barrier analysis performed.	<input type="checkbox"/>	N/A
(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 type="checkbox"/>	N/A

Participation Requirements		Comments
How the DOE has undertaken an assessment of the existence of similar projects.	<input type="checkbox"/>	N/A
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 type="checkbox"/>	N/A
Confirmation by the DOE that the proposed CDM project activity is not common practice.	<input type="checkbox"/>	N/A
(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"/>	Section 4.7 of the Validation Report.
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"/>	Section 4.7 of the Validation Report.
State opinion of the project participant's ability to implement the monitoring plan.	<input checked="" type="checkbox"/>	Section 4.7 of the Validation Report.
(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"/>	The details are provided in section 4.2 of the validation report
(11) The validation report shall describe the following with respect to the local stakeholder consultation.		
Describe the steps taken to assess the adequacy of the local stakeholder consultation.	<input checked="" type="checkbox"/>	Kindly refer Section 4.3 of the Validation Report.
State the opinion on the adequacy of the local stakeholder consultation.	<input checked="" type="checkbox"/>	Kindly refer Section 4.3 of the Validation Report.

Participation Requirements		Comments
(12) The validation report shall describe whether the project participants 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"/>	Kindly refer Section 4.3 of the Validation Report.
(13) The validation report shall include the DOE's final validation opinion.	<input checked="" type="checkbox"/>	Section 5.0 of the Validation Report.
(14) The validation report shall include the following at a minimum:		
State conclusions regarding the proposed CDM project activity's conformity with applicable CDM requirements.	<input checked="" type="checkbox"/>	Section 5.0 of the Validation Report. All findings are closed and meet the applicable CDM requirements.
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"/>	Validation process presented in Section 1.3 and conclusions presented in Section 5.0 of the Validation Report.
Reflect the results of the dialogue between the DOE and the project participants, 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"/>	
A summary of the validation process and its conclusions.	<input checked="" type="checkbox"/>	Validation process presented in Section 1.3 and conclusions presented in Section 5 of the Validation Report.
All the applied approaches, findings and conclusions, especially on: baseline selection, additionality, emission factors and monitoring.	<input checked="" type="checkbox"/>	Throughout Section 4 of the Validation Report.

Participation Requirements		Comments
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"/>	Section 3.3 of the Validation Report.
A list of interviewees and documents reviewed.	<input checked="" type="checkbox"/>	List of interviewees is presented in Section 2.3. List of documents reviewed is presented in Sections 2.1 and 2.2.
Details of the validation team.	<input checked="" type="checkbox"/>	Section 1.4 and Appendix B of the Validation Report.
Information on quality control within the team/of the validation process.	<input checked="" type="checkbox"/>	Section 2.7 of the Validation Report
Appointment certificates or curricula vitae of the validation team members.	<input checked="" type="checkbox"/>	Appendix B presents curricula vitae for team members.

Additionally, as per Paragraph 149 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, 18 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		
(1) Does the small-scale project qualify under the following:		
Renewable energy project activities with a maximum output capacity equivalent of up to 15 megawatts (or an appropriate equivalent).	<input checked="" type="checkbox"/>	The output capacity of the project is 6MW, which is less than 15 MW and thus complies with the definition of a small scale project
Energy efficiency improvement project activities which reduce energy consumption, on the supply and/or demand side, limited to those with a maximum output of 60 GWh per year (or an appropriate equivalent);	<input checked="" type="checkbox"/>	N/A

SMALL-SCALE PROJECT ACTIVITIES		
Other project activities limited to those that result in emission reductions of less than or equal to 60 kt CO ₂ equivalent annually;	<input checked="" type="checkbox"/>	N/A.
(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 methodology selected is fully applicable to the Project Activity, and that the Project Participants used the methodology appropriately.
(3) During validation of a small-scale project activity confirm:		
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 installed capacity of the project is 6 MW which is well below to the threshold of 15 MW for small-scale projects. The installed capacity was verified from the purchase order.
The project activity conforms to one of the approved small-scale categories and applies the relevant tool or methodology. The DOE shall confirm that the small-scale methodologies are applied in conjunction with the general guidance to the methodologies.	<input checked="" type="checkbox"/>	Methodology AMS - I.D. Version 17.0 is valid from June 17, 2011 onwards. Requests for registration can be submitted until 25 Jul 2015 23:59:59 GMT
The proposed small-scale project activity is not a debundled component of a large-scale project activity, in accordance with the "Guidelines on assessment of debundling for SSC project activities".	<input checked="" type="checkbox"/>	Project is not a de-bundled component of a large-scale project activity, which was confirmed during the site visit.
(4) Determine whether the proposed SSC project activity is additional in accordance with CDM requirements applicable for small-scale project activities.	<input checked="" type="checkbox"/>	Yes, it is complies with all requirements

SMALL-SCALE PROJECT ACTIVITIES		
(5) Small-scale project activities that follow the simplified modalities and procedures for small-scale CDM project activities may not apply a large-scale approved methodology. However, a project activity that is within the small-scale project activity thresholds may apply a large-scale approved methodology if it follows the modalities and procedures for large-scale project activities such that:		
The project activity is not a debundled component of a large-scale project, in accordance with the rules defined in Appendix C of the simplified modalities and procedures for small-scale CDM project activities.	<input checked="" type="checkbox"/>	Project is not a de-bundled component of a large-scale project activity, which was confirmed during site visit.
Whether an assessment of the environmental impacts of the proposed CDM project activity is required by the host Party.	<input checked="" type="checkbox"/>	Not require by the host Party. Details provided in Section 4.8 of the validation report.

Appendix B

Curricula Vitae

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.

EDUCATION

B.Sc. Eng. Environmental Engineering, University of Guelph, 1996

Other Training

Testing Industrial Air Emissions, 2000

Chemical Hydrogeology, University of Waterloo, 2002

Environmental Microbiology, 2002

Industrial Processes, 2004

Environmental Economics, 2006

Industrial Ecology, 2007

ISO 14064 Part 1 – Greenhouse Gas Inventories, 2008

ISO 14064 Part 2 – Greenhouse Gas Projects, 2008

ISO 14064 Part 3 – Greenhouse Gas Verification, 2010

EMPLOYMENT HISTORY

1998-	Principal/Vice-President
Present	Conestoga-Rovers & Associates, Waterloo, Ontario
	Named CRA Principal/Vice-President, 2013
	Named CRA Associate, 2006
1998	Research Assistant, Agriculture and Agri-Food Canada
1996-97	Environmental and Quality Assurance Technician, Golden Town Apple Products

PROFESSIONAL REGISTRATIONS/AFFILIATIONS

Registered Professional Engineer: Ontario

Michigan Board of Professional Engineers Fundamentals of Engineering Exam, April 1999

PROFILE OF PROFESSIONAL ACTIVITIES

Greenhouse Gas Emissions Reporting, and Validation, and Verification and Life Cycle Assessment

- Manager of CRA's Greenhouse Gas Assurance Services group responsible for coordinating and managing all greenhouse gas validation and verification projects under programs administered by the United Nations Framework Convention on Climate Change Clean Development Mechanism, The Gold Standard, Verified Carbon Standard, The Climate Registry, Carbon Disclosure Project, and the governments of Alberta, British Columbia, Massachusetts, Ontario, and Quebec.
- Project Manager and technical advisor for the preparation and verification of applications for funding to Sustainable Development Technology Canada for various clients, including the preparation of life cycle assessments.
- Project Manager for the preparation of a web-based, database-driven Environmental Footprint Calculator for a large cement, aggregate, and construction company in Canada.

- Lead verifier, verification team member, and independent peer reviewer for over 50 validation and verification audits of greenhouse gas inventories and projects in Alberta, Argentina, British Columbia, Colombia, Malaysia, Massachusetts, and Ontario and under several voluntary carbon markets.
- Project Manager for review and assessment of greenhouse gas emissions from the upstream oil and gas industry for Environment Canada.
- Peer Reviewer for the preparation of a Greenhouse Gas Inventory for a large North American potato chip producer, a large North American waste company, and several other clients.
- Senior Technical Advisor for the assessment of reporting requirements under the USEPA Mandatory Greenhouse Gas Reporting Rule for clients in the petroleum industry.

Air Emissions Sampling, Permitting, and Reporting

- Project Manager for numerous air emissions assessments for clients in Canada reporting under the National Pollutant Release Inventory (NPRI) and the Greenhouse Gas Reporting Program.
- Project Manager, Project Coordinator, and project engineer on numerous air permit applications and air emissions reports for numerous clients throughout Ontario.
- Project Coordinator for the Ontario Ambient Air Monitoring Sites for Environment Canada's Canadian National Air Toxics Measurement Program in 2004/2005. Responsible for coordination of all aspects of the sampling and reporting activities for over 10 ambient air monitoring sites in Ontario.
- Conducted sampling and reporting for numerous air emission source testing projects in Canada, the United States, and Puerto Rico, including specialized field gas chromatography sampling.
- Lead technical advisor for ambient air monitoring programs at multiple sites in Ontario and New Brunswick.
- Project Manager and Coordinator for air emissions activities associated with multiple facilities for an automotive parts manufacturer in Ontario, including preparation of Ontario Ministry of the Environment Director's Order appeal documents, Certificate of Approval (Air) Applications, Ontario Regulation 127 and National Pollutant Release Inventory reporting, and source sampling.

Agriculture-Related Experience

- Primary researcher for preparation of a paper regarding the evaluation of swine manure treatment processes for Agriculture and Agri-Food Canada.
- Researcher for the evaluation of a prototype cattle manure treatment technology for Agriculture and Agri-Food Canada.
- Project Manager for assessment of environmental issues associated with an aerobic composting operation.
- Technical Advisor for project to revise a greenhouse gas project protocol related to cattle manure emission reductions under the Verified Carbon Standard.

Environmental Due Diligence and Remediation

- Project Manager for ongoing Remedial Investigation/Feasibility Study (RI/FS) activities at a Superfund Landfill Site in Ohio.
- Project Manager for RCRA corrective action and Ohio Voluntary Action Program activities at a former refractory manufacturing facility in Ohio.

- Conduct investigative and remedial activities for a chemical manufacturing facility in Ontario including:
 - Project management, technical and field support relating to the remediation of contaminated off-site Municipal Aquifer
 - Project Manager for the design and construction of a \$4.2 million dollar ammonia treatment system for contaminated groundwater
 - Project Coordinator for annual ambient air monitoring program downwind of the site
 - Supervise and conduct field activities such as groundwater sampling, groundwater elevation monitoring, surface water sampling, surficial soil sampling, and waste water sampling air and odour sampling
- Project Manager for a large indoor contaminated soil excavation and groundwater collection trench installation at a former wallpaper manufacturing facility in Ontario.
- Project Manager and Project Coordinator for a large site assessment, plant demolition, and contaminated soil and groundwater remediation project at a former airplane manufacturing facility in Ontario.
- Project Manager and Phase I auditor for a large multi-site due diligence project at pulp and paper, mining, and port facilities in the Province of Newfoundland and Labrador.
- Project Manager and Project Coordinator for several litigation support projects in the United States, including preparation of expert reports, expert witness support, and completion of potentially responsible party searches.
- Project Manager and Assessor for numerous Phase I and II Environmental Site Assessments and Environmental Compliance Audits in the United States and Canada.
- Project Manager for activities at a large chemical manufacturer in Ontario, including wastewater treatment system optimization, compliance audit, Certificate of Approval (Air) Application preparation, asbestos survey, and ongoing compliance assistance.
- Project Manager for an AS/SVE and bioremediation project at an industrial site in New Jersey.
- Project Manager/Coordinator for facility-wide environmental and health and safety compliance audits and environmental monitoring programs for two large automotive manufacturing sites in Ontario.
- Project engineer for an Engineering Evaluation and Cost Assessment (EE/CA) for the remediation of a lead-acid battery disposal area in Michigan.

EDUCATION

B.Sc. Eng. Engineering Chemistry, Queen's University, 2004

Other Training

WHMIS/Hazard Communication Training, 2005

Environmental Site Assessment and Remediation, EPIC Learning Centre, 2006

Transportation of Dangerous Goods Training, 2008

Manufacturing Processes, 2012

EMPLOYMENT HISTORY

2004-Present Conestoga-Rovers & Associates, Waterloo, ON

2003-04 Student Research Assistant, Analytical Services Unit, Queen's University, Kingston, ON

PROFESSIONAL REGISTRATIONS/AFFILIATIONS

Registered Professional Engineer: Ontario

Fast Track Auditor/Verifier: The Gold Standard Foundation

PROFILE OF PROFESSIONAL ACTIVITIES

Greenhouse Gas Validation/Verification Projects

- Audit Resources Manager and Project Manager in the Greenhouse Gas Assurances (GGAS) Group.
- Lead Verifier in CRA's GGAS Group.
- Performed role of Auditing Team Member for the following United Nations Framework Convention on Climate Change (UNFCCC) Clean Development Mechanism (CDM) Projects:
 - Biomass Based Thermal Energy Projects Malaysia (PoA and CPA) – Sectoral Scope 1
 - Recovery and Use of Associated Petroleum Gas Normally Combusted in Flare Stacks in Oil-Producing Fields, Colombia (PoA and CPA) – Validation, Sectoral Scope 1
 - Electricity Generation using Associated Gas Normally Flared in Petroleum Production Fields, Colombia (PoA and CPA) in Colombia – Sectoral Scope 1
- Performed role of Lead Auditor in Training/Auditing Team Member for the following Verified Carbon Standard (VCS) Projects:
 - Dempsey Ridge Wind Farm Project in Oklahoma - Validation and Verification, Sectoral Scope 1
 - Red Hills 123 MW Wind Power Project in Oklahoma – Verification, Sectoral Scope 1
- Performed roles of Team Leader (Lead Verifier/Auditor) or Auditing Team Member for other greenhouse gas (GHG) Assurance projects under the DOE Accreditation including the Verification of the Recycling of Refrigerators, Freezers, and Metal-Containing Foam Insulation Panels in the South-East of Brazil (Sectoral Scope 13) under the Fair Recycling Foundation (formerly the Swiss Charter).

- Performed role of Auditing Team Member 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
 - Innophos Canada Inc., Port Maitland, Ontario
 - CertainTeed Gypsum Canada, Inc. Mississauga, Ontario
- Performed role of Lead Verifier for the following Massachusetts GHG verification projects in accordance with 310 CMR 7.71: Reporting of Greenhouse Gas Emissions:
 - Framingham State University, Framingham, Massachusetts
 - Hazen Paper Company, Holyoke, Massachusetts
 - Alliance Leather Inc., Peabody, Massachusetts

Environmental Site Assessment and Due Diligence

- Conduct investigative and remedial activities for a chemical manufacturing facility in Ontario including:
 - Project Engineer for Annual Monitoring Reports
 - Primary author of monthly Progress Reports, consisting of assessment and management of analytical data
 - Field support relating to the remediation of contaminated off-site Municipal Aquifer
 - Develop and maintain site monitoring specifications
- Project coordinator for ongoing Remedial Investigation/Feasibility Study (RI/FS) activities at a Superfund Landfill Site in Ohio. Responsibilities include coordination and scheduling of field activities, budget management and invoicing, work plan preparation, contractor procurement, client communication, and report preparation.
- Preparation of several Environmental Emergency (E2) Plans for facilities in accordance with Environmental Emergency Regulations of the Canadian Environmental Protection Act, 1999.
- Project coordinator and on-site environmental supervisor for Phase II Environmental Site Assessments at sites throughout Canada and USA. Responsibilities include coordination and scheduling of field activities, contractor procurement, drilling oversight, and collection of soil and groundwater samples.
- Field support for a large multi-site due diligence project at pulp and paper, and mining facilities in the Province of Newfoundland and Labrador.
- Preparation of proposals and reports for activities including Phase I and II Environmental Site Assessments (ESAs), Decision Support Packages, due diligence investigations, soil and groundwater investigations, and site closures. Proposal preparation includes review of previous site history, work plan development, and costing preparation.
- Participation in groundwater remediation activities including well development, water level monitoring, and sampling events at industrial and agricultural facilities in Ontario and Texas.
- Prepared and submitted National Pollution Release Inventory (NPRI) Reports to the Ontario Ministry of the Environment and Environment Canada, on behalf of multiple companies.
- Responsible for 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 of waste at a permitted treatment, storage, and disposal facility.

- Project coordinator for environmental assessment projects for an oil company in Texas.

Project Chemist/Quality Control Officer

- Project coordinator for analytical aspects of projects including the preparation of laboratory contracts, review of laboratory results for completeness, and invoicing.
- Responsible for providing chemical advice to CRA field staff, for both Canadian and American projects, to ensure that appropriate sampling and QA/QC procedures are followed.
- Responsible for monitoring analytical data generated by subcontract laboratories, and ensuring that all aspects of sample processing are conducted in accordance with CRA's rigorous QA/QC program.
- Responsible for coordination and management of analytical requests and subcontract laboratories including cost control and invoice administration.
- Review and validation of analytical results for jobs in accordance with United States Environmental Protection Agency (USEPA) Contract Laboratory Programs (CLP) documents entitled, "National Functional Guidelines for Organic Data Review" and "National Functional Guidelines for Inorganic Data Review".
- Texas Risk Reduction Program understanding and rule application skills.

PUBLICATIONS AND PRESENTATIONS

- Smith, D.B., Loney, A.C., and Chan, V. 2009. *Quantifying Environmental Performance Using an Environmental Footprint Calculator*. Climate Change and Technology Conference, May 2009, Hamilton, Ontario.

EDUCATION

B.Eng. Environmental Engineering (Co-op), University of Guelph, 2008

EMPLOYMENT HISTORY

2008-Present Conestoga-Rovers & Associates, Waterloo, ON
2007 Student Engineering Assistant, Conestoga-Rovers & Associates (8 months)
2006 Student Engineering Assistant, Conestoga-Rovers & Associates (8 months)
2005 Student Biomonitoring Technician, Ontario Ministry of the Environment (4 months)

PROFESSIONAL REGISTRATIONS/AFFILIATIONS

Registered Professional Engineer: Ontario

Lead Offset Verifier (Ozone Depleting Substances and Agriculture): California Air Resources Board

Fast Track Validator/Verifier: The Gold Standard Foundation

PROFILE OF PROFESSIONAL ACTIVITIES

Greenhouse Gas Validation/Verification Projects

- Audit Resources Manager and Project Manager in the Greenhouse Gas Assurances (GGAS) Group and assisted in the successfully obtaining CRA's Designated Operating Entity (DOE) status with the UNFCCC effective as of May 28, 2010, the Verified Carbon Standard as of August 3, 2010, the International Standards Organization (ISO) 14064 as of November 14, 2011, The Climate Registry as of December 14, 2011, and The Gold Standard Foundation as of December 22, 2011.
- Performed roles of Team Leader (Lead Auditor), Peer Reviewer, and/or Auditing Team Member for the following UNFCCC Clean Development Mechanism (CDM) Projects:
 - CO₂ Removal and Liquefaction from the H₂ Production Plant in Campana, Argentina - Validation, Sectoral Scope 5
 - Bionersis LFG Project Chile 4 (Los Angeles, Chile) - Validation, Sectoral Scope 13
 - Bionersis LFG Project Argentina 2 (Tucumán, Argentina) - Validation, Sectoral Scope 13
 - Bionersis LFG Project Colombia 2 Verification Bucaramanga, Colombia, Sectoral Scope 13
 - Bionersis LFG Project in Pasto, Colombia - Verification, Sectoral Scope 13
 - Bionersis LFG Project in Duquesa, Dominican Republic - Verification, Sectoral Scope 13
 - Malaysia Biogas Projects Programme of Activities (PoA) - Validation of Multiple Sites, Sectoral Scopes 1 and 13
 - Bionersis Landfill Gas Flare & Energy Program in Chile (PoA and CPA) - Validation, Sectoral Scope 13
 - Bionersis Landfill Gas Flare & Energy Program in Argentina (PoA and CPA) - Validation, Sectoral Scope 13
 - San Jacinto Geothermal Power Project in Nicaragua - Validation, Sectoral Scope 1

- Recovery and Utilization of Gas Normally Flared in Petroleum Production Fields in Colombia (PoA and CPA) – Validation, Sectoral Scope 1
- Biomass Based Thermal Energy Projects Malaysia (PoA and CPA) – Validation, Sectoral Scope 1
- PoA for Electricity Generation using Natural Gas in Colombia – Validation, Sectoral Scope 1
- Performed roles of Team Leader (Lead Auditor), Peer Reviewer, and/or Auditing Team Member for the following Verified Carbon Standard (VCS) Projects:
 - Dempsey Ridge Wind Farm Project in Oklahoma - Validation and Verification, Sectoral Scope 1
 - MRO Grouped Wind Projects in Iowa – Validation, Sectoral Scope 1
 - Red Hills 123 MW Wind Power Project in Oklahoma – Verification, Sectoral Scope 1
 - Willow Creek Dairy Farm Project in Oregon – Validation and Verification, Sectoral Scope 13
- Team Leader (Lead Auditor) for the VCS Methodology Assessment of changes from the CDM Methodology entitled "Methane Avoidance through Separation of Solids from Wastewater or Manure Treatment Systems" (AMS.III-Y).
- Team Leader (Lead Auditor) for several other GHG Assurance projects under the DOE Accreditation including the Verification of the Recycling of Refrigerators, Freezers, and Metal-Containing Foam Insulation Panels in the South- East of Brazil (Sectoral Scope 13) under the Fair Recycling Foundation (formerly the Swiss Charter) and the Validation of the 50 MW Dinar Wind Power Project in Turkey (Sectoral Scope 1) under The Gold Standard.
- Performed Team Leader (Lead Auditor) or Peer Review Roles for nine (9) projects within Ontario for the 2011 reporting period. This work was completed under CRA's ISO Accreditation.
- Performed Team Leader (Lead Auditor) or Peer Review Roles for 45 projects within The Climate Registry Batch Verification process for the 2011 reporting period. This work was completed under CRA's ISO Accreditation
- Conducted greenhouse gas verification assessments as a Team Leader (Lead Auditor) in Training/ Team Leader (Lead Auditor) under Observation for three projects for Alberta Environment; a liquid natural gas plant in Boyle, Alberta (2011), a pulp mill (2011) in Fort Saskatchewan, Alberta, and a static-pile aerobic composting site (2009) in Edmonton, Alberta under the Alberta Offset System which included a site visit, review of the overall processes, record keeping practices and techniques, emission reduction calculations compliance, and a report on findings.
- Experience with the validation process in preparation of Project Design Documents (PDD) and Monitoring Plans for emission reduction projects related to landfill gas destruction under the Clean Development Mechanism (CDM) for the Manaus landfill located in Manaus, Brasil.
- Performed greenhouse gas emission reductions calculations and prepared the Monitoring Report for the Aurà and CEAMSE landfill sites in Brazil and Argentina respectively. The reports were completed to UNFCCC standards and included a review of the overall process, record keeping practices and techniques and emission reduction calculation compliance.
- Performed greenhouse gas emission reduction calculations as a lead GHG quantifier using a modified first order kinetic landfill gas model for a municipal solid waste anaerobic digester under CDM requirements for various sites across the Canada and the USA as well as in Egypt. All of these sites also included an assessment of emission reductions associated with cogeneration.
- Completed assessment for emission reduction credits for a large-scale operation green-packaging project using sugar cane bagasse in Brazil under CDM biomass methodology AM0057 requirements. The project additionally generates electricity using the bagasse material.
- Prepared detailed assessment of transferability of Alberta Offset System protocols to CDM protocols as a lead GHG consultant in relation to both cement and asphalt methodologies for Shell.

- Conducted a greenhouse gas verification report for the Eastview Landfill Site in Guelph, Ontario. The report was compiled in accordance with the requirements of the PERRL Initiative.
- Developed a Project Information Note (PIN) for the emissions avoided through aerobic composting at the Orgaworld London and Ottawa, Ontario composting facilities as well as the City of Guelph Wet/Dry composting facility. Preparation of this document includes the quantification of emission reduction using the Alberta Offset System Protocols.
- Developed several project documents under various emissions reporting standards for landfill operations in British Columbia including the Nanaimo Landfill and the Salmon Arm Landfill Sites and in Ontario at the Eastview Landfill Site. These reports have been prepared in accordance with ISO-14064 Part 2 standards using various GHG methodologies to quantify the emissions such as those from the UNFCCC and CAR.

Design and Operations

- Performed tender administration, contract administration and construction oversight roles for the design and installation of a landfill gas collection and control system at the Stratford Landfill Site.
- Developed a detailed design and design and operations report for the landfill gas collection and control system for the Humberstone Landfill, Welland, Ontario, and the Stratford Landfill, Stratford, Ontario including the well field design, specification drawings including all relevant hydraulics, buried pipe and condensate trap sizing calculations.
- Performed inspection and repair services for the Peterborough Landfill Site header pipe. Works included video inspection, removal, re-bedding/grading and compaction works.
- Provided operational assistance for the Eastview Landfill including balancing of the well field, assessments of the leachate collection system and the operations of the utilization facility.
- Provides operational support for organics processing facilities in London and Ottawa, Ontario including odour assessments involving the odour abatement equipment efficiencies and operations improvements to minimize fugitive odours.
- Developed the model package (Design and Operations Report) for the Application for Amendment to Provisional Certificate of Approval for a Waste Disposal Site, for landfill sites which apply under amended Ontario Regulations 232/98 and 347 for the Ontario Ministry of the Environment.
- Assisted in preparation of a study regarding applicable wastewater treatment technologies and disposal options for an organics processing facility in Ontario.
- Assisted with the submission of applications for Amendments Certificate of Approval for Air, Waste Disposal Site and Section 53 (Industrial Sewage Works) under the Environmental Protection Act (including formulation of a Design and Operations Report for the site) for source-separated organics aerobic composting facilities in London, Ontario and Ottawa, Ontario.

Computer Aided Design

- Performs day-to-day Auto-CAD drawings including process flow diagrams, general and civil scale drawings related to a variety of composting and landfill projects.

Solid Waste Management:

- Prepared cost estimates for the installation of landfill gas collection and control systems using both flaring and utilization technologies for international and Canadian landfills: Manaus landfill (Manaus, Brasil), and the Eastview landfill (Guelph, Ontario).

- Assisted with the preparation of successful proposals for a 5-year contract to haul and process source-separated organics for the City of Toronto and a 20-year contract to process source-separated organics for the City of Ottawa.
- Assisted in the completion of a 2007 Baseline Study of Canadian Landfills based on waste filing practices and leachate management considering nearly 90 landfill sites for Environment Canada.

Modelling and Assessment:

- Experience with Scholl-Canyon and Rettenberger first-order landfill gas generation models for the prediction of landfill gas generation at several landfills in Canada, the United States of America (U.S.A.) and South America.
- Experience with Scholl-Canyon and Rettenberger first-order landfill gas generation models as they apply to anaerobic municipal solid waste digesters for projects in the U.S.A.
- Performed landfill gas modelling and assessment for international landfills: González Catàn landfill and Ensenada landfill (Buenos Aires, Argentina), Aurà landfill (Belém, Brasil), Manaus landfill (Manaus, Brasil).
- Performed greenhouse gas emission reductions calculations and reporting for the Eastview landfill (Guelph, Ontario) and assisted with emission reductions calculations for the Merrick landfill (North Bay, Ontario) under the Pilot Emission Reductions, Removals, and Learnings (PERRL) initiative.

Agricultural Engineering

- Developed and assisted in implementing a monitoring methodology under the Climate Action Reserve (CAR) for the collection and utilization of methane gas produced in anaerobic dairy manure digesters for various projects in California, U.S.A.
- Assisted in approvals process for Provincial certificates of approval for the utilization of leachate and ammonium sulphate as a non-agricultural source material (NASM) on agricultural lands for a composting facility's in both London and Ottawa, Ontario.
- Lead Auditor for the VCS Methodology Assessment of changes from the CDM Methodology entitled "Methane Avoidance through Separation of Solids from Wastewater or Manure Treatment Systems" (AMS.III-Y).

Presentations

- Prepared and delivered a presentation entitled "Understanding the Clean Development Mechanism (CDM) Project Development Process" to the CRA community through a recorded webinar conference. The presentation covered all aspect of project validation and verification from the perspective of a project developer as well as an independent party conducting validations or verifications of project activities.
- Prepared a presentation on the current and future odour management at a composting facility operation within Ontario. The presentation was presented to local stakeholders, members of the MOE and the local Municipality.
- Prepared and delivered a presentation entitled "Meter Training for GHG Validation/Verification Projects" to the CRA community through a recorded webinar conference. The presentation covered all aspect of metering including types of meters, proper location of meters, validation and verification principles related to metering, and questions to ask during the validation/verification process.

Appendix C

Validation Findings Assessments



**CONESTOGA-ROVERS
& ASSOCIATES**

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Mr. Ananth Nakirikanti
Director
Arhyama Solar Power Pvt. Ltd.
8-3-224/4/a/11 & 12, 2nd Floor
Door No. 215, Yousufguda Main Road
Hyderabad, India
500045

Dear Mr. Nakirikanti:

Re: Validation Findings Assessment, Version 7
6 MW Solar Power Project by Arhyama Solar Power

Conestoga-Rovers & Associates Limited (CRA) is pleased to submit the following Clean Development Mechanism (CDM) Validation Findings Assessment (Assessment) for the Small-Scale CDM Project Activity "6 MW Solar Power Project by Arhyama Solar Power" (Project Activity).

CRA completed the first assessment, dated August 29, 2014, based on the following materials supplied by Mr. Sumeet Singhvi (acting as CDM consultant for Arhyama Solar Power Pvt. Ltd.) via electronic mail (email) on 17 July 2014 and 18 August 2014.

- "6 MW Arhyama Solar Power Project PDD Version 1", Project Design Document (PDD), Version 02, dated 12 April 2014 - provided via email on 17 July 2014
- "Purchase Order.pdf", Purchase Order dated 08 February 2013 issued by Arhyama Solar Power Pvt. Ltd. to REC Modules Pte. Ltd. (Supplier) for photovoltaic solar power modules – provided via email on 18 August 2014
- "Power Purchase Agreement.pdf", Power Purchase Agreement for procurement of power generated by project activity, between Arhyama Solar Power Pvt. Ltd. and Dr. Reddys Laboratories Limited dated October 2013 – provided via email on 18 August 2014
- "ODA Undertaking.pdf", declaration for No ODA involvement in the Project Activity by Arhyama Solar Power Pvt. Ltd. dated 14 July 2014 – provided via email on 18 August 2014



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- "NOC_central power distribution.pdf", No Objection Certificate from Central Power Distribution Company of AP Limited for Grid Connectivity of Project Activity dated 18 January 2013 – provided via email on 18 August 2014
- "Commissioning Certificate.pdf", solar project commissioning certificate issued by State Electricity Board, Andhra Pradesh dated 23 December 2013 – provided via email on 18 August 2014
- "NOC_NRE.pdf", NOC from New & Renewable Energy Development Corporation of Andhra Pradesh Ltd. dated 19 March 2013 – provided via email on 18 August 2014
- "Emission Reduction Sheet.exl", Emission Reduction Spreadsheet – provided via email on 18 August 2014
- "Prior Consideration_UNFCCC.pdf", intimation mail sent to UNFCCC for prior CDM consideration dated 15 March 2013 – provided via email on 18 August 2014
- "Prior Consideration_NCDMA.pdf", intimation mail sent to NCDMA for prior CDM consideration dated 15 March 2013 – provided via email on 18 August 2014
- "F-CDM-PC.pdf", CDM form for prior CDM consideration dated 15 March 2013 – provided via email on 18 August 2014

CRA completed the third assessment, dated 9 January 2015, based on the following materials supplied by the Project Participant via e-mail on 16 September 2014:

- Detailed project report dated 12 January 2013 - provided via email dated 16 September 2014
- Invitation for local stake holder consultation process , dated 30 November 2012 – provided via email dated 16 September 2014
- Gram Panchyat notice for local stake holder consultation process dated 28 November 2012 – provided via email dated 16 September 2014
- Minutes of meeting for local stake holder consultation process dated 10 December 2012 – provided via email dated 16 September 2014
- Host country approval from Government of India dated 3 September 2014 – provided via email dated 16 September 2014
- Modalities of communication for the project activity dated 20 October 2014 – provided via email dated 16 September 2014



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- Technical lifetime of the modules dated 1 September 2011 – provided via email dated 16 September 2014

CRA completed the fourth assessment, dated 10 January 2015, based on the following materials supplied by the Project Participant via e-mail on 9 January 2015:

- "6 MW Arhyama Solar Power Project PDD", Project Design Document (PDD), Version 3.0, dated 9 January 2015 - provided via email on 9 January 2015

CRA completed the fifth assessment, dated 5 February 2015, based on the following materials supplied by the Project Participant via e-mail on 9 February 2015:

- "6 MW Arhyama Solar Power Project PDD", Project Design Document (PDD), Version 4.0, dated 7 February 2015 - provided via email on 9 February 2015

CRA completed the fifth assessment, dated 5 February 2015, based on the peer review/technical review of the project documents.

CRA completed the sixth assessment, dated 9 February 2015, based on the Project Participant responses provided on 7 February 2015.

CRA completed the seventh assessment, dated 11 February 2015, based on the following materials supplied by the Project Participant via e-mail on 10 February 2015:

- "6 MW Arhyama Solar Power Project PDD", Project Design Document (PDD), Version 5.0, dated 10 February 2015

This proposed small-scale Project Activity was assessed by the CRA Project Team against the Approved Small-Scale Methodology AMS I.D. "Grid connected renewable electricity generation" Version 17.0, the associated methodological tools, and relevant CDM guidance documentation.

The Assessment findings are categorized as either a Corrective Action Request (CAR), Forward Action Request (FAR), or as a Clarification Request (CL).



CARs are raised within this Assessment if:

- The Project Participant has made mistakes that will influence the ability of the Project Activity to achieve real, measurable, verifiable and additional emission reductions
- The CDM requirements for a small-scale Project Activity have not been met
- There is a risk that emission reductions cannot be monitored or calculated

FAR(s) are raised to highlight issues related to project implementation that require review during the first verification of the Project Activity. FARs will not relate to the CDM requirements for registration and thus do not require any formal response from the Project Participant.

CLs are raised if the CRA Project Team determines that the information provided by the Project Participant is insufficient, unclear, or not transparent enough to establish whether the applicable CDM requirements are met.

CRA further notes that this findings assessment is an open list and additional findings may be added as the validation process progresses. In all cases, it is the responsibility of the Project Participant to respond in an accurate and timely manner, when required, within the established timelines within this Assessment. Formal responses are to be delivered from the Project Participant to the CRA Project Team in one complete submission.

CRA reserves the right to review the associated fees and timelines presented within the contract dated 07 July 2014 should:

- Numerous response submissions be received from the Project Participant
- A finding (CAR/CL) raised by the CRA Project Team not be closed within 30 days of initial notification to the Project Participant by CRA

Each CAR, FAR, and CL is presented in individual tables below. The Project Participant is required to complete only the cells containing text that is highlighted in blue italics in response to each item.



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A summary of the results of the findings assessment is presented as follows:

Finding Category	Total Number of Findings	Findings Remaining Open
CAR	12	0
FAR	0	0
CL	1	0
TOTAL	13	0

Date:	26/08/2014		Raised by:	Vivek Kumar Ahirwar	
Type:	CAR	Number:	#1	Reference:	Project Standard, Version 07.0, Paragraph 78
Lead Auditor Comment:					
<p>Paragraph 78 of the CDM Project Standard, Version 07.0 states:</p> <p><i>78. Project participants shall obtain a letter of approval from the DNA of each Party involved in the proposed CDM project activity confirming that:</i></p> <p><i>(a) The Party is a Party to the Kyoto Protocol;</i></p> <p><i>(b) Participation in the proposed CDM project activity is voluntary;</i></p> <p><i>(c) Project participants are authorized to participate in the proposed CDM project activity.</i></p> <p>In accordance with Paragraph 78 of the CDM Project Standard, Version 07.0 (Project Standard), the CRA Project Team requires a letter of approval provided by the DNA - National CDM Authority (NCDMA) Ministry of Environment & Forests, for the Party involved in the proposed Project Activity.</p> <p>The CRA Project Team requests letter of approval when available, and before the request for registration can be submitted.</p> <p>Please clarify the statement the "Host Country Approval issued by India DNA declaring acceptability of the Sustainable Indicators by the Project Activity", which is mentioned in Section A.1 of the PDD.</p>					
Project Participant Response:				Date: 16/09/2014	
The letter of approval from MoEF is being submitted for the DOEs perusal. The letter of approval specifically mentions that "The authority confirms that the project contributes to Sustainable Development in India" justifying the sentence mentioned in Section A.1.					
Documentation Provided by Project Participant:					
Letter of Approval dated 03/09/2014					



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Date:	26/08/2014		Raised by:	Vivek Kumar Ahirwar	
Type:	CAR	Number:	#1	Reference:	Project Standard, Version 07.0, Paragraph 78
Information Verified by Lead Assessor:					
The CRA assessment team reviewed the HCA (Host Country Approval) letter dated 03 September 2014, and confirmed the letter satisfies the requirements of CDM Project Standard paragraph 78.					
Reasoning for Acceptance and Close Out:				Date: 19/11/2014	
The HCA dated 03 September 2014 vide reference number 4/1/2014 is checked by the assessment team. The same information is also cross checked from the NCDMA website http://cdmindia.gov.in/project_details_view.php?id=2180&oid=1&page=1&reporttype=1 The HCA clearly indicates the following points:					
(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 – "6 MW Solar Power Project by Arhyama Solar Power " – mentioned in the PDD being submitted for registration					
CAR #1 is Closed Out					
Acceptance and Close out by Lead Assessor:				Date: 19/11/2014	



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Date:	26/08/2014		Raised by:	Vivek Kumar Ahirwar	
Type:	CAR	Number:	#2	Reference:	Project Standard, Version 07.0 Paragraph 80
Lead Auditor Comment:					
Paragraph 80 of the Project Standard states: <i>80. Project participants shall define for 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:</i> (a) <i>The title of the proposed CDM project activity or PoA (and UNFCCC reference number if available);</i> (b) <i>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);</i> (c) <i>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;</i> (d) <i>A list of all project participants, contact details and specimen signatures of their authorized signatories;</i> (e) <i>The signature of an authorized signatory (electronic if available) of all project participants confirming their agreement with the MoC statement.</i> In accordance with Paragraph 80 of the Project Standard Version 07.0, the CRA Project Team requests that the Project Participant submit the Modalities of Communication (MoC) statement.					
Project Participant Response:				Date: 16/09/2014	
MOC is being submitted to the DOE for its perusal.					
Documentation Provided by Project Participant:					
Modalities of Communication dated 20/08/2014					
Information Verified by Lead Assessor:					
The CRA assessment team reviewed the Modalities of Communication, dated 20 October 2014 and confirmed that the requirements of the CDM Project Standard Paragraph 80 were met.					
Reasoning for Acceptance and Close Out:				Date: 19/11/2014	
The CRA assessment team reviewed the Modalities of Communication, dated 20 October 2014. The MOC was received from the Project Participant, and the signatory in the MOC is same as the name, title and designation specified in Appendix 1 of the revised PDD Version 02.					
CAR #2 is Closed Out					
Acceptance and Close out by Lead Assessor:				Date: 19/11/2014	



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Date:	26/08/2014		Raised by:	Vivek Kumar Ahirwar		
Type:	CAR	Number:	#3	Reference:	PDD, Section A.1, A.2 and A.3.	

Lead Auditor Comment:

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 CRA Project Team request that the Project Participant clarify the following:

1. The annual power generation by the project activity is not consistently mentioned in Section A.1 (9,899 MWh/year) and Section B.6.3 (10,139 MWh for one year). Please clarify.
2. Please provide the total GHG emission reductions for the chosen crediting period.
3. Project activity description in Section A.1 mentions that the project activity will displace electricity from the generation-mix of power plants connected to the Southern grid, however, further discussion mentioned that generated electricity will sell to third party. These are contradictory descriptions, please clarify.
4. Further elaborate the description in Scenario existing prior to the implementation of project activity and Baseline Scenario, as both discuss that project is grid-connected. Additionally, Section A.1 of the PDD states that the scenario existing prior to the implementation of the project activity is electricity delivered to the grid by the project activity. The scenario existing prior to the implementation of the project activity cannot involve electricity delivered to the grid by the project activity. The baseline for the proposed project activity is the scenario that reasonably represents the anthropogenic emissions by sources of GHGs that would occur in the absence of the proposed project activity. Please revise the PDD to specifically state how electricity is delivered to the grid in this case/area, including a description of the technology that would be employed and/or the activities that would take place in the absence of the proposed Project Activity.
5. The Version of tool referred in Section A.1 is not provided.
6. The sectoral scope(s) and type of the project activity has not been mentioned in Section A.1 of PDD.
7. The geographical coordinates of the project activity is not provided with the seconds values. If it is zero, please specify the same.
8. The Map does not clearly mention physical/geographical location of the project activity.
9. The list and the arrangement of the main manufacturing systems and equipment involved are not complete. The Project Participant is requested to provide the detailed description of equipments with rated capacity/specifications installed at site (e.g., PV modules, Inverters, etc.)
10. The location of monitoring equipment has not been mentioned in Section A.3 of the PDD.
11. The Project Participant has not provided the number of modules with respect to the individual capacity 235 Wp and 240 Wp PV modules in the description of the PDD Section A.3. In addition, the Project Participant has to confirm the 6 MWp total capacity of the project.
12. The Version of tool is not mentioned in Section A.3 of the PDD.

The Project Participants are requested to revise the PDD to include the required information.



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Date:	26/08/2014		Raised by:	Vivek Kumar Ahirwar	
Type:	CAR	Number:	#3	Reference:	PDD, Section A.1, A.2 and A.3.
Project Participant Response:				Date: 16/09/2014	
<ol style="list-style-type: none">1. The annual power generation mentioned in Section A.1 is the average power for the renewable crediting period. The value mentioned in Section B.6.3 is the total electricity generated in the 1st year which is considered for sample emission reduction calculation.2. The emission reduction value is already mentioned in Section A.1 of the revised PDD. The project will displace approx 9,535 tCO₂ in the chosen 7 year renewable crediting period.3. The project activity will supply power to Dr. Reddys Laboratory Limited under the PPA signed between M/s Arhyama and Dr. Reddys Laboratory. The sale of power is long term open access basis. Hence, the sale is to third party. Moreover, both pre-project scenario and baseline scenario mentions that electricity delivered to the grid which would otherwise be obtained from Grid. The southern grid is obviously the baseline and the project is connected to the grid however the sale is to third party.4. The description provided in Section A.1 of the PDD is in accordance with the methodology. Moreover, description of the technology that would be employed has been described under Section A.3.5. The Tool Version is now mentioned in the revised PDD Version 02.6. The sectoral scope and type is now updated in the revised PDD Version 02.7. The solar plant is spread across approx. 35 acres. It is thus not appropriate to give a single point location for the plan in seconds. Accordingly, the location is mentioned in degrees and minutes while avoiding the seconds.8. The map has now been revised.9. The details are now mentioned in Section A.3 of the revised PDD Version 02.10. The location detail of the monitoring equipment is already mentioned in Section B.3 of the PDD11. The technical description is now mentioned in the revised PDD. Moreover, commissioning certificate is already submitted to the DOE which clearly mentions that the capacity of the project is 6 MW.12. The Version number of the tool is now updated in the revised PDD Version 02.					
Documentation Provided by Project Participant:					
PDD Version 2 dated 16/09/2014					
Information Verified by Lead Assessor:					
The CRA assessment team reviewed PDD Version 02, dated 16/09/2014, and the commission certificate, signed on 23 December 2013, and confirmed that the Project Participant clarified and addressed the listed items.					
Reasoning for Acceptance and Close Out:				Date: 19/11/2014	
The following summarizes CRA's review of the revised PDD Version 02:					
<ol style="list-style-type: none">1. The average power generation value is stated in Section A.1 of the PDD while the total power generation is mentioned in Section B.6.3.					



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Date:	26/08/2014	Raised by:	Vivek Kumar Ahirwar		
Type:	CAR	Number:	#3	Reference:	PDD, Section A.1, A.2 and A.3.
2.	The emission reduction value is stated in Section A.1 of the PDD.				
3.	The Power purchase agreement is signed between PP and Dr. Reddys Laboratory Limited. The connected grid is Southern regional grid. Hence the chosen baseline is correct and complies with the requirement of the applied methodology				
4.	The baseline was selected as per the applied methodology. In the absence of project activity the electricity would have been procured from the grid.				
5.	The Tools referenced by the methodology, and the corresponding Version numbers, are now included in the revised PDD Version 02.				
6.	The sectoral scope and type are stated in the revised PDD Version 02.				
7.	The provided geographical co-ordinates are found to be correct by the assessment team. The second avoidance is justified by the Project Participant and the same is acceptable to the assessment team.				
8.	The revised map, clearly depicting the physical/geographical location of the project activity, is now included in the revised PDD Version 02.				
9.	The detail list of equipment is now included in the revised PDD Version 02. The equipment list was compared to equipment observed during the onsite visit, and no discrepancies were found.				
10.	The location detail of the monitoring equipment is included in the flow diagram in Section B.3 of the PDD				
11.	The commission certificate specifies the technical capacity of the project activity. The same is checked by the assessment team and found correct.				
12.	The Version number of the tool is updated in the revise PDD Version 02.				
CAR #3 is Closed Out					
Acceptance and Close out by Lead Assessor:				Date: 19/11/2014	

Date:	26/08/2014		Raised by:	Vivek Kumar Ahirwar		
Type:	CL	Number:	#1	Reference:	PDD, Section A.5.	
Lead Auditor Comment:						
Paragraph 40 of the CDM Project Standard (Version 07.0) states: " <i>project participants shall provide information on sources of public funding for the proposed CDM Project Activity or PoA.</i> "						
The CRA 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: 16/09/2014		
The ODA document is now submitted to the DOE.						



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Date:	26/08/2014	Raised by:	Vivek Kumar Ahirwar		
Type:	CL	Number:	#1	Reference:	PDD, Section A.5.
Documentation Provided by Project Participant:					
ODA document dated 14/07/2014					
Information Verified by Lead Assessor:					
The CRA assessment team reviewed the ODA document, dated 14 July 2014, and confirmed the requirement of CDM Project Standard Paragraph 40 was met.					
Reasoning for Acceptance and Close Out:				Date: 19/11/2014	
ODA is checked by the assessment team and found correct.					
CL #1 is Closed Out					
Acceptance and Close out by Lead Assessor:				Date: 19/11/2014	

Date:	26/08/2014	Raised by:	Vivek Kumar Ahirwar		
Type:	CAR	Number:	#4	Reference:	PDD, Section B.1 B.2
Lead Auditor Comment:					
In accordance with the "Technology/measure" of AMS I.D. (Version 17.0), the CRA Project Team request that the Project Participant clarify the following information mentioned in Section B.2 of the PDD (Version 1):					
<ol style="list-style-type: none">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 Project Participant has discussed both options, please clarify which option was chosen for the Project Activity.2. For Justification 02: The Project Participant is requested to justify how the 3rd option of Table 2 of AMS I.D. Version 17 is applicable for the Project Activity. Please provide supporting evidence for the same.3. For Justification 03: The explanation for applicability condition 3 of the AMS I.D. Version 17 has not specified which option (a to d) is applicable to project activity. Please clarify.4. For Justification 03: The explanation for applicability condition 3 of the AMS I.D. Version 17 referred to footnotes 3, 4, 5, which are not included in the PDD. Please clarify.5. For Justification 04: The justification provided for applicability condition 4 of the AMS I.D. Version 17 is not correct as justification does not specify whether condition 4 (for Hydro projects) of the AMS I.D. Version 17.0 applies to the project activity or not, please revise appropriately.6. For Justification 04: The explanation for applicability condition 4 of the AMS I.D. Version 17 referred to footnotes 5 & 6, which are not included in the PDD. Please clarify.7. For Justification 05: The justification provided for applicability condition 5 of the AMS I.D. Version 17 is not correct as justification does not specify whether condition 5 (for projects that have both renewable and non-renewable components) of the AMS I.D. Version 17 applies to the project activity or not, please revise appropriately.8. For Justification 05: The explanation for applicability condition 5 of the AMS I.D. Version 17 referred to footnote 8, which is not included in the PDD. Please clarify.					



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Date:	26/08/2014	Raised by:	Vivek Kumar Ahirwar		
Type:	CAR	Number:	#4	Reference:	PDD, Section B.1 B.2
Lead Auditor Comment:					
<p>9. For Justification 06: The justification provided for applicability condition 6 of the AMS I.D. Version 17 is not correct as justification does not specify whether condition 6 (Combined heat and power (co-generation) systems) of the AMS I.D. Version 17 applies to the project activity or not, please revise appropriately. (If it is not applicable, please specify the same clearly in the PDD.)</p> <p>10. For Justification 07: The explanation for applicability condition 7 of the AMS I.D. Version 17 referred to footnote 9, which is not included in the PDD. Please clarify.</p> <p>Also, please provide exact references (i.e., document number, title, Version number) for all tools referenced by the Methodology AMS I.D in Section B.1 of the PDD.</p> <p>The project diagram provided in Section B.3 of the PDD does not reflect the actual scenario of other project plants (not project activity) connected to the Southern Grid, the direction of the arrow appears to be wrong between Southern Grid and 'All power plants connected to grid'. Please clarify.</p>					
Project Participant Response:				Date: 16/09/2014	
<p>1. The justification is now modified.</p> <p>2. The PPA agreement for the open access sale is already provided to DOE. Thus 3rd option is applicable to the Justification 02.</p> <p>3. Justification is now modified in the revised PDD Version 02.</p> <p>4. Error is now rectified in the revise PDD Version 02</p> <p>5. Justification is modified now</p> <p>6. The error is modified now in the revised PDD Version 02</p> <p>7. Justification is modified now</p> <p>8. The error is modified now in the revised PDD Version 02</p> <p>9. Justification is modified now</p> <p>10. The error is modified now in the revised PDD Version 02</p> <p>All the tools referred by AMS.I. D is now mentioned in Section B.1 the revise PDD Version 02. The error in the project boundary is corrected in Section B.3 of the revise PDD Version 02.</p>					
Documentation Provided by Project Participant:					
PDD Version 2 dated 16/09/2014					
Information Verified by Lead Assessor:					
The CRA assessment team reviewed PDD Version 02 and confirmed that Section B of the document was revised to address the listed items.					



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Date:	26/08/2014	Raised by:	Vivek Kumar Ahirwar		
Type:	CAR	Number:	#4	Reference:	PDD, Section B.1 B.2
Lead Auditor Comment:					
Reasoning for Acceptance and Close Out:				Date: 19/11/2014	
The CRA assessment team confirmed that the justification to all the methodological criteria is revised in the PDD Version 2. All the errors pertaining to applicability criteria were rectified.					
<u>CAR #4 is Closed Out</u>					
Acceptance and Close out by Lead Assessor:				Date: 19/11/2014	

Date:	26/08/2014	Raised by:	Vivek Kumar Ahirwar		
Type:	CAR	Number:	#5	Reference:	PDD, Section B.4
Lead Auditor Comment:					
In order to confirm that the Data Source used for calculation of grid emission factor is the latest available data at the time of PDD webhosting, the CRA Project Team request that the Project Participant specify the date of publication of CEA data for Grid Emission Factor in the table in Section B.4 of the PDD (Version 01).					
Project Participant Response:				Date: 16/09/2014	
The latest Version of CEA database is mentioned in Section B.4 of the revise PDD Version 02					
Documentation Provided by Project Participant:					
PDD Version 2 dated 16/09/2014					
Information Verified by Lead Assessor:					
The CRA assessment team reviewed Section B.4 of PDD Version 02 and confirmed that the Version of the CEA database is specified, and it is the latest available data at the time of PDD web-hosting.					
Reasoning for Acceptance and Close Out:				Date: 19/11/2014	
The latest Version of CEA database was used for the project activity.					
<u>CAR #5 is Closed Out</u>					
Acceptance and Close out by Lead Assessor:				Date: 19/11/2014	



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Date:	26/08/2014	Raised by:	Vivek Kumar Ahirwar		
Type:	CAR	Number:	#6	Reference:	PDD, Section B.5
Lead Auditor Comment:					
<p>Paragraph 33 of the CDM Project Standard (Version 07.0) states:</p> <p><i>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.</i></p> <p>The CRA Project Team request that the Project Participant clarify why the following requirements are not demonstrated in the Section B.5 of the PDD (Version 1):</p> <ol style="list-style-type: none">1. The PP has not provided the timeline for intimation sent to UNFCCC and DNA.2. The PP has not provided the timeline for acknowledgment of intimation from UNFCCC and DNA.3. The PP did not mentioned the start date of project activity. <p>The PP is requested to provide the above details in the PDD and provide supporting evidence.</p>					
Project Participant Response:				Date: 16/09/2014	
The above details have already been provided in the PDD Version 01					
Documentation Provided by Project Participant:					
None					
Information Verified by Lead Assessor:					
The CRA assessment team reviewed PDD Version 01 for required details related to CDM Project Standard paragraph 33.					
Reasoning for Acceptance and Close Out:				Date: 19/11/2014	
The details regarding the prior consideration and start date of the project is already mentioned in the PDD Version 01.					
<u>CAR #6 is Closed Out</u>					
Acceptance and Close out by Lead Assessor:				Date: 19/11/2014	

Date:	26/08/2014	Raised by:	Vivek Kumar Ahirwar		
Type:	CAR	Number:	#7	Reference:	PDD Sections B.6.1, B.6.3 and B.6.5
Lead Auditor Comment:					
<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>					



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Date:	26/08/2014		Raised by:	Vivek Kumar Ahirwar	
Type:	CAR	Number:	#7	Reference:	PDD Sections B.6.1, B.6.3 and B.6.5
<p>In order to check the reproducibility of emission reduction and grid emission factor calculations; the CRA 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.</p> <p>Please note the submitted spread sheet was not for Project Activity, please clarify.</p> <p>Also, the PP is requested to clarify the following:</p> <ol style="list-style-type: none">1. It is not clear why the paragraph 3 of AMS I.D. Version 17 is discussed under Section B.6.1 of the PDD.2. It is not clear why the discussion of combined margin /Baseline Emission factor (Southern Grid) is not provided in Section B.6.2 of the PDD.3. It is not clear how the generated power of 10,139 MWh/annum for the Project Activity is calculated. Please provide supporting calculations of the same in Section B.6.3 of the PDD.4. It is not clear why the annual estimated emission reduction for each year is not consistently reported in Section B.6.4 of the PDD.					
Project Participant Response:				Date: 16/09/2014	
<p>The emission reduction calculation is now submitted:</p> <ol style="list-style-type: none">1. The error is now omitted from the PDD Version 022. The combined margin table is now introduced in the revise PDD Version 023. The emission sheet is now provided to DOE4. The error is now modified in the revise PDD Version 02					
Documentation Provided by Project Participant:					
Emission Reduction Sheet PDD Version 2 dated 16/09/2014					
Information Verified by Lead Assessor:					
The CRA assessment team reviewed PDD Version 02 dated 16 September 2014, and the Emission Reduction spreadsheet, and confirmed that the listed items were addressed.					
Reasoning for Acceptance and Close Out:				Date: 19/11/2014	



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Date:	26/08/2014		Raised by:	Vivek Kumar Ahirwar		
Type:	CAR	Number:	#7		Reference:	PDD Sections B.6.1, B.6.3 and B.6.5
<p>Following is the review of CRA regarding the NC raised:</p> <ul style="list-style-type: none">• Paragraph 3 is now removed from Section B.6.1 of the revised PDD Version 02.• The Combined margin factor is now included in the revised PDD Version 02• The calculation forms the part of revised PDD Version 02• The annual estimation of emission reduction for each year is consistent in the revise PDD Version 02 <p><u>CAR #7 is Closed Out</u></p>						
Acceptance and Close out by Lead Assessor:				Date: 19/11/2014		

Date:	26/08/2014		Raised by:	Vivek Kumar Ahirwar		
Type:	CAR	Number:	#8		Reference:	PDD, Section 7.0 and Appendix 5
Lead Auditor Comment:						
The Project Participant is requested to clarify the following in the Monitoring Plan specified in Section 7 of the PDD (Version 1):						
1. The estimated value of 9,899 MWh /yrs of $EG_{facility,y}$ is not consistent with the generated power value of 10,139 MWh/annum stated in the Section B.6.3 of the PDD.						
2. 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 CRA Project Team request that the PDD be revised accordingly.						
Project Participant Response:					Date: 16/09/2014	
1. As already explained average power is 9,899 MWh/year and 1st year generated power is 10,139 MWh/year.						
2. The modification is done in the revise PDD Version 02.						
Documentation Provided by Project Participant:						
PDD Version 2 dated 16/09/2014						
Information Verified by Lead Assessor:						
The CRA assessment team reviewed PDD Version 02 dated 16/09/2014, and confirmed that the listed items were addressed.						
Reasoning for Acceptance and Close Out:					Date: 19/11/2014	



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Date:	26/08/2014	Raised by:	Vivek Kumar Ahirwar		
Type:	CAR	Number:	#8	Reference:	PDD, Section 7.0 and Appendix 5
<p>Following is the review of CRA team:</p> <ul style="list-style-type: none">• The estimated emission reduction is now consistent in the revise PDD Version 02• Project participant is now consistently used in the revised PDD Version 02 <p><u>CAR #8 is Closed Out</u></p>					
Acceptance and Close out by Lead Assessor:				Date: 19/11/2014	

Date:	26/08/2014	Raised by:	Vivek Kumar Ahirwar		
Type:	CAR	Number:	#9	Reference:	PDD, Section C.1.1-2
<p>Lead Auditor Comment:</p> <p>The CRA 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 CRA Project Team requests that the Project Participant justify, 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: 16/09/2014	
<p>1. The start date of the project is construction, implementation or real action of the project as per glossary of CDM terms. The Purchase order placed is the real action and hence considered as the start date of the project.</p> <p>2. The manufacturer specification is now provided to DOE against the claim of 25 years of operational lifetime.</p>					
<p>Documentation Provided by Project Participant:</p> <p>Technical Specifications PDD Version 2 dated 16/09/2014</p>					
<p>Information Verified by Lead Assessor:</p> <p>The CRA assessment team reviewed the provided documents related to technical lifetime, and PDD Version 02.</p>					
Reasoning for Acceptance and Close Out:				Date: 19/11/2014	
<p>Following is the review of CRA team:</p> <p>The start date is considered as per the glossary of CDM terms Version 07. Purchase order is being considered as the start date and the same is acceptable to the CRA team.</p> <p>The manufacturer specification is checked and the lifetime as confirmed in the PDD is deemed correct.</p> <p><u>CAR #8 is Closed Out</u></p>					
Acceptance and Close out by Lead Assessor:				Date: 19/11/2014	



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Date:	26/08/2014	Raised by:	Vivek Kumar Ahirwar		
Type:	CAR	Number:	#10	Reference:	PDD, Section E.1
Lead Auditor Comment:					
The project participant is requested to provide evidence of the local stakeholder consultation (copy of the newspaper advertisement, attendance list, copy of presentation materials, copy of any written comments from Stakeholders).					
Project Participant Response:				Date: 16/09/2014	
Evidence of the local stakeholder consultation (copy of the newspaper advertisement, attendance list, and minutes of the meeting) are being submitted.					
Documentation Provided by Project Participant:					
Newspaper advertisement, attendance list, and minutes of the meeting of the local stakeholder consultation process.					
Information Verified by Lead Assessor:					
The CRA assessment team reviewed the Minutes of Meeting and the invitation, and confirmed that evidence of the local stakeholder consultation was provided.					
Reasoning for Acceptance and Close Out:				Date: 19/11/2014	
The Minutes of meeting, invitation to local stake holder and gram panchayet notice is being submitted to the assessment team. The same is checked and found correct and thus it can be assessed that the stakeholder meeting is done properly.					
<u>CAR #10 is Closed Out</u>					
Acceptance and Close out by Lead Assessor:				Date: 19/11/2014	

Date:	09/01/2015	Raised by:	Sukanta Das		
Type:	CAR	Number:	#11	Reference:	PDD, Section B.7
Lead Auditor Comment:					
In due course of validation and document verification it was observed that the monitoring as mentioned in the revised PDD Version 02 dated 16 September 2014 is not as per the onsite practice.					
Moreover, the detail regarding the losses is also not clearly mentioned in the PDD. Corrective action is sought in this regard.					
Project Participant Response:				Date: 09/01/2015	
Section B.7.2 of the PDD has now been revised as per the onsite practice. Moreover, calculation of net electricity supplied to the grid has now been explained transparently. Also, Wheeling Loss has now been added as a parameter under Section B.7.1.					
Documentation Provided by Project Participant:					
PDD Version 3 dated 09/01/2015					



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Date:	09/01/2015	Raised by:	Sukanta Das		
Type:	CAR	Number:	#11	Reference:	PDD, Section B.7
Information Verified by Lead Assessor:					
The CRA Project Team reviewed PDD Version 3, dated 9 January 2015, and confirmed that the monitoring stated in the document matches onsite practice. As well, the CRA Project Team confirmed that losses are clearly described in the PDD.					
Reasoning for Acceptance and Close Out:				Date: 09/01/2015	
The monitoring practice onsite is now revised in the PDD Version 03. The net electricity supplied to the grid is calculated by the state electricity board by using the export and import value. The state board then issues the energy settlement report to the project participant mentioning the net electricity supplied and the same settlement report will be used for the emission reduction calculation. Net electricity supplied as mentioned in energy settlement report can be cross checked with the invoices. The same is in line with the methodology.					
The calculation of net electricity is not in the control of the PP. Moreover, the wheeling loss is deducted from the generated value; at present 3.99 percent is used. The wheeling loss is considered as the monitoring parameter and the loss during verification will be considered for emission reduction calculation. The wheeling loss value also forms the part of energy settlement report prepared by the state electricity board.					
<u>CAR #11 is Closed Out</u>					
Acceptance and Close out by Lead Assessor:				Date: 09/01/2015	

Date:	05/02/2015	Raised by:	Brent Boss		
Type:	CAR	Number:	#12	Reference:	PDD
Lead Auditor Comment:					
Following a peer review of the project documents, the Project Participant is requested to revise the PDD to address the following issues:					
<ul style="list-style-type: none">• The Project Boundary figure and description in Section B.3 of the PDD should be reviewed and revised if appropriate. Are all power plants that are connected to the Southern Grid part of the project activity?• The calculation of $EG_{\text{facility},y}$, total quantity of net electricity delivered to the Southern Grid (10,139 MWh) must be described in detail in the PDD in Sections B.6.1 and B.6.3. Detailed descriptions of all other parameter calculations are provided, with the exception of $EG_{\text{facility},y}$• Provide a reference and supporting documentation for the Plant Load Factor (PLF) of 19.29 percent, and update the PDD accordingly• The Project Participants provided the DOE with an emission reduction spreadsheet that details why the annual estimated emission reductions for each year of the crediting period are not consistently reported. However, the Project Participants must include a written explanation of the same (i.e., 0.8 percent degradation) in Section B.6.4 of the PDD as well.• Please specify in Section B.7.1 under the $EG_{\text{facility},y}$ parameter if the energy meters are bi-directional or if separate meters are used to measure electricity imported and electricity exported.• Please specify the calibration requirements for the meters described in Section B.7.1.					
Project Participant Response:				Date: 07/02/2015	



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Date:	05/02/2015		Raised by:	Brent Boss		
Type:	CAR	Number:	#12	Reference:	PDD	
<ul style="list-style-type: none">• All power plants that are connected to the Southern Grid are not a part of the project activity. In accordance with para 5.1 of AMS I.D Version 18.0, the figure under Section B.3 of the PDD depicts the entire project boundary, but it does not imply that all power plants that are connected to the Southern Grid are a part of the project activity.• The calculation of $EG_{facility,y}$ is now described in detail in the PDD in Sections B.6.1 and B.6.3.• The Detailed Project Report giving the Plant Load Factor (PLF) of 19.29 percent has already been provided to the DOE for reference.• Explanation on why there is a consistent reduction in the annual estimated emission reductions for each year of the crediting period is now explained in Section B.6.4 of the PDD.• Bi-directional energy meters are used to measure electricity imported and electricity exported. The same is now explicitly mentioned in Section B.7.1 under the $EG_{facility,y}$ parameter.• Section B.7.1 of the PDD specifically mentions that the calibration frequency of all the meters will be annual.						
Documentation Provided by Project Participant:						
PDD Version 4 dated 07/02/2015						



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Date:	05/02/2015		Raised by:	Brent Boss		
Type:	CAR	Number:	#12	Reference:	PDD	
Information Verified by Lead Assessor:						
The CRA Project Team reviewed PDD Version 4, dated 7 February 2015.						
The Project Participant response indicates that the project boundary is shown in Section B.3 of the PDD, in accordance with the AMS I.D Version 18.0. The CRA Project Team notes that PDD Version 4.0 applies AMS I.D Version 17.0, not Version 18.0. The CRA Project Team assessed the project boundary against the definition provided in the applied methodology AMS I.D Version 17.0.						
Paragraph 9 of AMS-I.D Version 17.0 states "the spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system" ¹⁰ that the CDM project power plant is connected to".						
¹⁰ Refer to the latest approved Version of the "Tool to calculate the emission factor for an electricity system" for definition of an electricity system.						
Paragraph 10(e) of the Tool to calculate the emission factor for an electricity system, Version 04.0 (Tool) defines a grid/project electricity system as the "spatial extent of the power plants that are physically connected through transmission and distribution lines to the project activity (e.g., the renewable power plant location or the consumers where electricity is being saved) and that can be dispatched without significant transmission constraints".						
The Project Boundary depicted in the Section B.3 of PDD Version 4.0 does not correspond to the definitions in the applied methodology and associated Tool.						
The detail regarding the Net electricity provided to the grid is detailed in the Sections B.6.1 and B.6.3 of PDD Version 4.0; however, the units stated in the equation are incorrect.						
The PLF reference is now included in the revised PDD.						
The PDD was revised to indicate that bi-directional meters are used onsite.						
The calibration frequency specified in PDD Version 4.0 does not match that listed in the Project Participant Response above.						
Reasoning for Non-Acceptance and Close Out:				Date: 09/02/2015		



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Date:	05/02/2015	Raised by:	Brent Boss
Type:	CAR	Number:	#12
		Reference:	PDD

Following are the CRA review on the replies regarding the issues raised:

1. The Project Participant response indicates that the project boundary is shown in Section B.3 of the PDD, in accordance with the AMS I.D Version 18.0. The CRA Project Team notes that PDD Version 4.0 applies AMS I.D Version 17.0, not Version 18.0. The CRA Project Team assessed the project boundary against the definition provided in the applied methodology AMS I.D Version 17.0.

Paragraph 9 of AMS-I.D Version 17.0 states "the spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system¹⁰ that the CDM project power plant is connected to".

¹⁰ Refer to the latest approved Version of the "Tool to calculate the emission factor for an electricity system" for definition of an electricity system.

Paragraph 10(e) of the Tool to calculate the emission factor for an electricity system, Version 04.0 (Tool) defines a grid/project electricity system as the "spatial extent of the power plants that are physically connected through transmission and distribution lines to the project activity (e.g., the renewable power plant location or the consumers where electricity is being saved) and that can be dispatched without significant transmission constraints".

Based on the definitions contained in the applied methodology and associated Tool, the project boundary in Section B.3 of the PDD Version 4.0 is incorrect. The CRA Project Team requests that the Project Participant revise the project boundary depicted in the PDD.

2. The detail calculation of $EG_{\text{facility},y}$ in Section B.6.1 and B.6.3 are now provided in the PDD Version 04. The CRA Project Team observed that the definition of BE_y references 'Annual operating days', when the value used is operating hours in a year (annual operating hours). The Project Participant is requested to correct the text in Section B.6.3 of the PDD.
3. The Detailed Project Report is used as the source of data for emission reduction calculation. The CRA Project Team reviewed and confirmed the PLF value of 19.29 percent is listed in Annexure 3: Revenue & Cost Details and Annexure 6: BEP calculation of the Techno Economic Viability Study for Arhyama Solar Power Pvt. Ltd., prepared by Dun & Bradstreet Information Services India Private Limited (Detailed Project Report). The CRA Project Team confirmed that a footnote was added to Section B.6.3 of the PDD Version 4.0 to specify a source for the PLF value.
4. The CRA Project Team confirmed a footnote was added to Section B.6.4 of the PDD Version 4.0. The Project Participant added footnote 3 which explains a 0.8 percent degradation was applied, which explains the inconsistent baseline emission values year over year. The CRA Project Team observes the text of the footnote would be more appropriately included in Section B.6.4 rather than as a footnote.
5. The CRA Project Team confirmed that Section B.7.1 of the PDD Version 4.0 explicitly states that bi-directional meters are used onsite for the project activity.
6. The calibration frequency for the meters is once in a five years which is national applicable standards for bidirectional meters. The specified calibration requirements in PDD Version 4.0 do not match with the Project Participant response provided above, which states calibration will be completed annually.

CAR #12 remains open.



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Date:	05/02/2015	Raised by:	Brent Boss		
Type:	CAR	Number:	#12	Reference:	PDD
Project Participant Response:				Date: 10/02/2015	
<ol style="list-style-type: none">1. The project boundary has now been revised.2. Text in Section B.6.3 of the PDD has now been revised and the definition of BEy now references 'Annual operating hours ' instead of 'annual operating days'.4. The text of the footnote is now included in Section B.6.4 rather than as a footnote.6. The response provided above was incorrectly mentioned as annual calibration of meters. However, please note that calibration of all meters will be done once in 5 years in accordance with the CEA (Central Electricity Authority) requirements. The PDD already mentions that the calibration will be done once in 5 years.					
Documentation Provided by Project Participant:					
PDD Version 5 dated 10/02/2015					
Information Verified by Lead Assessor:				Date: 10/02/2015	
<p>The CRA project team assessed PDD Version 5 dated 10 February 2015 and confirmed</p> <ol style="list-style-type: none">1. The Project boundary is now corrected in the revised PDD Version 5.0. The same is now in line with the applied methodology. The project boundary now depicts the spatial extent of the power plant connected to the grid. The same is now checked and found correct by the assessment team2. Section B.6.3 was revised to correctly specify 'annual operating hours' in the BEy calculation in PDD Version 05 dated 10 February 20154. The degradation factor and reduction of emission reduction explanation now forms the part of the text in Section B.6.4 of the revised PDD Version 5.06. The calibration frequency is now corrected and consistent between the Project Participant responses and the PDD. The calibration will be done once every five years as per the national standards.					
Reasoning for Acceptance and Close Out:				Date: 10/02/2015	



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Date:	05/02/2015	Raised by:	Brent Boss		
Type:	CAR	Number:	#12	Reference:	PDD
Based on the issues raised above, and the responses provided (which are summarized below), the finding was closed out.					
1. The Project Boundary depicted in Section B.3 no longer includes all power plants connected to the Southern Grid, and is in accordance with the applied methodology, and applicable Tool. The revision in the PDD Version 05 dated 10 February 2015 is corrected.					
2. The annual operating days was a typographical error. The text in Section B.6.3 of PDD Version 5.0 is correct.					
4. The degradation factor and the reason for reduction of emission reduction year over year is now clearly stated in Section B.6.4 of the PDD, Version 5.0.					
6. The calibration frequency is once in a five year for bi-directional meters which is as per the national standard in the host country. Based on the Project Participant response dated 10 February 2015, the discrepancy noted in the revised PDD was due to an incorrect Project Participant response provided on 07 February 2015.					
<u>CAR#12 is Closed Out</u>					
Acceptance and Close out by Lead Assessor:				Date: 10/02/2015	

Should you have any questions regarding any of the CARs or CLs provided above please do not hesitate to contact the undersigned CRA Project Team Member.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Sukanta Das, M. Tech.

KP/ac/1-rev7
Encl.

cc: Adam Loney, P. Eng.
Valerie Chan, P. Eng.