Verification and certification report form for CDM project activities

(Version 04.0)

BASIC INFORMATION	
Title and UNFCCC reference number of the project activity	Chambal Power Limited's (CPL) proposed 7.5 MW biomass based power project at Rangpur, Kota District, Rajasthan, India UNFCCC ref. No- 0347
Scale of the project activity	☐ Large-scale ☒ Small-scale
Version number of the verification and certification report	02
Completion date of the verification and certification report	14/09/2021
Monitoring period number and duration of this monitoring period	Monitoring Period: 01 (of the 3rd Crediting Period) Duration: 01/03/2020 to 31/12/2020 (both dates are included)
Version number of the monitoring report to which this report applies	02
Crediting period of the project activity corresponding to this monitoring period	01/03/2020 to 28/02/2027 (Renewal, 3rd crediting period) Length: 7 years
Project participants	1. Suryaa Chamball Power Limited (India) 2. WeAct Pty Ltd. (Australia)
Host Party	India
Applied methodologies and standardized baselines	Selected Methodology: AMS-I.D. Version 18 – "Grid connected renewable electricity generation" Selected standardized baseline: N/A
Mandatory sectoral scopes	Sectoral scope : 1- Energy industries (renewable - / non-renewable sources)
Conditional sectoral scopes, if applicable	NA
Estimated amount of GHG emission reductions or GHG removals for this monitoring duration in the PDD	37,300 tCO_2e

Certified amount of GHG emission reductions or GHG removals for this monitoring period	Amount before 1 January 2013	Amount from 1 January 2013 until 31 December 2020	Amount from 1 January 2021
	NA	32,388 tCO_2e	0 tCO_2e

Name and UNFCCC reference number of the DOE	LGAI Technological Center, S.A. (Applus+ Certification) UNFCCC Ref. No.: E-0032

Name, position and signature of the approver of the verification and certification report	Mr. Agustín Calle de Miguel *Applus+ Certification CDM Technical Manager* Signature: 

SECTION A. Executive summary

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LGAI Technological Center, S.A. (hereafter referred to as Applus+ Certification) has been contracted by Suryaa Chamball Power Limited (formerly known as Surya Chambal Power Limited) to perform the periodical verification of "Chambal Power Limited's (CPL) proposed 7.5 MW biomass based power project at Rangpur, Kota District, Rajasthan, India" (UNFCCC Ref. No. 0347) applying the methodology AMS-I.D. Version: 18. The management of Suryaa Chamball Power Limited (SCPL) is responsible for the preparation of the GHG emissions data and the reported GHG emission reductions.

Scope of verification:

The verification is an independent and objective review and ex-post determination of the monitored reductions in GHG emissions by the DOE. The verification includes the implementation and operation of the project activity as set out in the PDD/Approved PDD in the monitoring period.

The verification tests the data and assertions set out in the monitoring report prepared for this monitoring period by the project participant and is based on the following:

(i) The approved methodology AMS I. D. version 18 "Grid connected renewable electricity generation", applied in the PDD,
(ii) The PDD (and Approved PDD), Monitoring plan
(iii) UNFCCC criteria referred to in the Kyoto Protocol criteria and the CDM modalities and procedures as agreed in the Bonn Agreement and the Marrakech Accords,
(iv) The CDM Validation and Verification Standard (VVS) for Project Activity, version 2.0,
(v) The CDM Project Standard (PS) and Project Cycle Procedure (PCP) for Project Activity, version 2.0.
(vi) Relevant decisions, guidance and clarifications of the CMP and CDM Executive Board and any other information and references relevant to the reported emission reductions.

The verification has considered both quantitative and qualitative aspects on stated/reported emission reductions. The monitoring report (all versions) and corresponding supporting documentation was assessed in accordance with the rules defined by UNFCCC, as appropriate to the Project activity. The verification is not meant to provide any consulting or recommendations to the project participant/others. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the monitoring activities.

Verification Process:

The verification process is conducted as per internal CDM Quality Manual, which includes the following steps;

a) Contract with Suryaa Chamball Power Limited and appointment of verification team and technical review team
b) Completeness check of Monitoring Report
c) Publication of Monitoring Report at UNFCCC website
d) Desk review of Monitoring Report and corresponding ER sheet by verification team and remote assessment audit (as per the guidelines published by UNFCCC during the covid-19 phase)
e) Interviews with the project team, relevant stakeholders etc. by the verification team
f) Reporting and closure of findings (CARs/CLs/FARs) and preparation of draft verification report
g) Independent technical review of the draft verification report and final/revised documentation (e.g., Monitoring Report, corresponding ER sheet and evidences)
h) Reporting and closure of TR comments/findings (i.e. CARs/CLs/FARs) and final approval for the decision made.
i) Issuance of final verification report and submission of request for issuance, as appropriate.

Verification Conclusion:
Based on the outcome of the verification process of the Project activity "Chambal Power Limited's (CPL) proposed 7.5 MW biomass based power project at Rangpur, Kota District, Rajasthan, India" (UNFCCC Ref. No. 0347) for the monitoring period 01/03/2020 to 31/12/2020 (including both dates) the verification team confirms that the implementation of referenced project activity is complying with applicable CDM rules and regulations as stated in the Monitoring Report (final) Version 03 dated 11/09/2021. The GHG emission

reductions were calculated correctly on the basis of the approved baseline and monitoring methodologies, AMS- I.D. Version: 18 and the monitoring plan contained in the revised PDD/1.9/.

Based on the information reviewed and evaluated Applus+ Certification confirms that the implementation of the project has resulted in 32,388 tCO_2e emission reductions during period 01/03/2020 to 31/12/2020 (both days included). Therefore, this is being submitted for request for issuance, as per UNFCCC procedures.

SECTION B. Verification team, technical reviewer and approver

B.1. Verification team member

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interviews	Verification findings
1.	Lead Auditor / Technical Expert	EI	Soni	Ravi Kant	Applus+ Certification	Y	N	Y	Y

B.2. Technical reviewer and approver of the verification and certification report

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer / Technical Expert	EI	Shen	Simon	Applus+ Certification
2.	Approver	IR	Calle de Miguel	Agustín	Applus+ Certification

SECTION C. Application of materiality

C.1. Consideration of materiality in planning the verification

No.	Risk that could lead to material errors, omissions or misstatements	Assessment of the risk		Response to the risk in the verification plan and/or sampling plan
		Risk level	Justification	
1.	**Manual adjustment of otherwise automatically recorded activity levels:** This error may be due to manually recording of actual readings in-to original records.	Low	Monitoring Equipment e.g. Energy Meters have totalize which reduce the chance of error as initial readings and final readings can be cross – check in every records. For measurement of quantity of fuel (biomass/fossil); measurement carried out by Belt weigher/flowmeter/Load-cell and for measurement of quality (NCV, moisture content) of fuel (biomass/fossil); measurement are carried by bomb calorimeter/Digital electronic balance.	100 per cent of the data and information was checked from log book/3.5/, JMR/3.3/ record book/3.6/ and cross-checked from bill/3.11/ and receipt records/3.14/.

			For each measurement record receipt is issued and same time recorded in log book. The total quality can be cross-checked from purchase bill/3.11/ and receipt from supplier/3.14/. The plant data was verified by plant manager in regular interval, so low potential risk of errors, omissions or misstatements.	
2.	**Human error in the quantification of emissions.** This error may be due to transfer of monitored data in-to Emission Reduction calculation sheet/4.4/ for calculation of actual emission reduction archived during monitoring period.	High	The monitoring data is transfer manually, so there is high potential risk of errors/errors, omissions or misstatements.	100 per cent of the data and information was checked from log book/3.5/, JMR/3.3/ record book/3.6/ and cross-checked from bill/3.11/ and receipt records/3.14/.

C.2. Consideration of materiality in conducting the verification

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The project activity is small- scale project achieving total emission reductions of <300,000 tons of CO_2e per year and applicable threshold for materiality in accordance with CDM VVS for PAs Version 02.0 paragraph 326(d) is 5%. All the monthly/daily/hourly reported figures for all monitoring parameter were verified with respective log book, monthly JMRs, bills and data sheets; were found to be consistent. Therefore, Applus+ Certification confirms that 100 per cent of the data and information was checked and verified, the value is free from any potential error / omission /misstatement and is in accordance to verification plan. There are no additional factors which might lead to introduction of error in emission reduction estimation.

SECTION D. Means of verification

D.1. Desk/document review

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The Monitoring Report version 01 dated 10/06/2021/1.1/ submitted by the PP was made publicly available on the UNFCCC website before the verification activities started. The published MR was assessed based on all the relevant documents. The aim of the assessment in the desk review was to:

- Verify the completeness of the data and the information presented in the MR;
- Check the compliance of the MR with respect to the monitoring plan depicted in the approved PDD/1.9/ and verify that the applied methodology was carried out. Particular attention to the frequency of measurements, the quality of the metering equipment including calibration requirements, and the quality assurance and quality control procedures was paid;
- Evaluate the data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.

A complete list of documents reviewed or referenced is available in Appendix-3 of this report.

D.2. On-site inspection

During the Remote Audit on 26/07/2021:				
No.	**Activity performed on-site**	**Site location**	**Date**	**Team member**
1.	Confirm the implementation and operation of the project;	SURYAA CHAMBALL POWER LIMITED, Village Rangpur, District Kota, Rajasthan, India	26/07/2021	Ravi Kant Soni
2.	Review the data flow for generating, aggregating and reporting the monitoring parameters;	SURYAA CHAMBALL POWER LIMITED, Village Rangpur, District Kota, Rajasthan, India	26/07/2021	Ravi Kant Soni
3.	Confirm the correct implementation of procedures for operations and data collection;	SURYAA CHAMBALL POWER LIMITED, Village Rangpur, District Kota , Rajasthan, India	26/07/2021	Ravi Kant Soni
4.	Cross-check the information provided in the MR documentation with other sources;	SURYAA CHAMBALL POWER LIMITED, Village Rangpur, District Kota, Rajasthan, India	26/07/2021	Ravi Kant Soni
5.	Check the monitoring equipment against the requirements of the PDD and the approved methodology, including calibrations, maintenance, etc.;	SURYAA CHAMBALL POWER LIMITED, Village Rangpur, District Kota, Rajasthan, India	26/07/2021	Ravi Kant Soni
6.	Review the calculations and assumptions used to obtain the GHG data and ER;	SURYAA CHAMBALL POWER LIMITED, Village Rangpur, District Kota, Rajasthan, India	26/07/2021	Ravi Kant Soni
7.	Identify if the quality control and quality assurance procedures are in place to prevent or correct errors or omissions in the reported parameters.	SURYAA CHAMBALL POWER LIMITED, Village Rangpur, District Kota , Rajasthan ,India	26/07/2021	Ravi Kant Soni

The audit team has conducted a remote site inspection via video-conference (via zoom call) with PP on different topics as mentioned under section D.3 of this report. Based on the discussion, MR review, as the review of UNFCCC procedures and guidelines, the verification team has proceeded to skip the site visit due to the COVID-19 pandemic. As per para 339 of CDM Validation and Verification Standard for project activities version 02.0, the verification team has used the following alternative means for its assessment and to justify that they are sufficient for the purpose of verification.

- By review of MR;
- By taking follow up actions by conducting interview with PP, to gather information about knowledge of project design, current situation via video-conference. Cross-checked evaluation under the scope of all information and references provided. Details of interviewees, topics covered, photographic and video-graphic evidences of the plant and operational status; and additional information presented in the below section “D.3 – Interviews”.

Verification team has further checked the site visit requirements mentioned in the VVS for Project Activity version 02.0 /**2.1**/. The justification for the remote assessment requirements of VVS PA version 02.0 /**2.1**/ have been sited below:

VVS PA version 02.0 requirements	Verification team justification
Para 338 (b) (b) On-site inspection taking into account	In line with the VVS requirements, the verification team has done the follow-up actions by means of the

paragraphs 339–341 below, involving: (i) An assessment of the implementation and operation of the CDM project activity as per the PDD or any approved revised PDD; (ii) A review of information flows for generating, aggregating and reporting the monitoring parameters; (iii) Interviews with relevant personnel to determine whether the operational and data collection procedures are implemented in accordance with the monitoring plan; (iv) Cross checks between information provided in the monitoring report and data from other sources such as plant logbooks, inventories, purchase records or similar data sources; (v) A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the PDD, the applied methodologies, the applied standardized baselines and the other applied methodological regulatory documents; (vi) A review of calculations and assumptions made in determining the GHG data and GHG emission reductions or net anthropogenic GHG removals; (vii) An identification of quality control and quality assurance procedures in place to prevent, or identify and correct, any errors or omissions in the reported monitoring parameters.	following: The team has carried out interviews with relevant personals to confirm and verify the implementation and operation of the CDM project activity as per the PDD and the PRC-approved revised PDD. This is 1st verification of the 3rd crediting period for the project; Although, pervious periodic monitoring reports and verification reports were also assessed. Further, the assessment team verified recent pictures of the monitoring equipment(s), video footage of the plant and its monitoring system; additionally all other relevant supporting documents were also reviewed and verified during the entire audit process. The verification team has carried out interviews using Zoom-call application with video camera function, in order to assess the information on monitoring plan in the PDD. Further, the team has reviewed the information flows for generating, aggregating and reporting the monitoring parameters. The ex-post parameters are sourced from monthly generation report, invoices, daily logs and also the backup purchase records, lab testing data, calibration certificates etc. This practice has been followed to check both the direct input values against the supporting documents and also by means of cross-checks from the third party reports, invoices etc. Also, the calculations and all input values in the ER sheet were reviewed and discussed with PP during the assessment. It was observed that all required documents, justification, explanation etc. were reliably presented by PP during the videoconference; which were found to be accurate and verifiable.
Para 339 It is mandatory for the DOE to conduct an on- site inspection at verification for the CDM project activity if: (a) It is the first verification for the DOE with regard to this project activity; (b) More than three years have elapsed since the last on-site inspection conducted for verification for the project activity; or (c) The project activity has achieved more than 300,000 tCO_2eq of GHG emission reductions or net anthropogenic GHG removals since the last verification when an on-site inspection was conducted.	The verification team has confirmed that the site visit for this project activity was not conducted due to the COVID-19 pandemic. The Executive Board of the Clean Development Mechanism (CDM) agreed at its 110th meeting, the Board agreed (in responses to Stakeholder Communication INQ-10737) to extend the COVID-19 Temporary Measures until 31/12/2021/**2.7**/. The verification team has further checked and then confirmed that the site visit cannot be postponed since a delay on performing the mandatory on-site visit for the project activity, will impact a delay in CERs delivery to its Annex-1 party WeAct Pty Ltd. (Australia), as there is an ERPA in place, signed on 03/11/2020 in between the parties /**6.5**/.

D.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Agarawal	Girish	Plant Head, Suryaa Chamball Power Limited	26/07/2021	Project Activity Description, implementation and operation of the project. Procurement Records & Consumption, Bill & Energy Bills/Records. Calculations and assumptions used to obtain the GHG data and ER	Ravi Kant Soni
2.	Sahu	A. P.	General Manager-QC, Suryaa Chamball Power Limited	26/07/2021	Procurement Records & Consumption, Bill & Energy Bills/Records.	Ravi Kant Soni
3.	Panchy	Dilip	Sr. Manager-Operations, Suryaa Chamball Power Limited	26/07/2021	Implementation and operation of the project	Ravi Kant Soni
4.	Borah	Deepjyoti	CDM-Consultant/Advisor	26/07/2021	Monitoring Data & Records Monitoring Plan, equipment , calibrations, maintenance, data records, certificates etc.;	Ravi Kant Soni

D.4. Sampling approach

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Not Applicable, as all monitoring data as reported in MR and ER were verified and checked from actual records.

D.5. Clarification requests (CLs), corrective action requests (CARs) and forward action requests (FARs) raised

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
Compliance of the monitoring report with the monitoring report form	-	CAR #1	-
Compliance of the project implementation and operation with the PDD	-	-	-
Post-registration changes			
Compliance of the monitoring plan with the methodologies including applicable tools and	CL #1	-	-

standardized baselines			
Compliance of monitoring activities with the monitoring plan	CL #5	-	-
Compliance with the calibration frequency requirements for measuring instruments	CL #4	-	-
Assessment of data and calculation of emission reductions or net removals	CL #2 CL #6 CL #7	CAR #2 and CAR#3	-
Assessment of reported sustainable development co-benefits	-	-	-
Global stakeholder consultation	-	-	-
Others (please specify)	CL #3	-	-
Total	7	3	0

SECTION E. Verification findings

E.1. Compliance of the monitoring report with the monitoring report form

Means of verification	The Monitoring Report version 03/1.5/ is compliant with Monitoring Report form (Version 08.0) /2.4/ and guidance as provided by UNFCCC. Applus+ Certification considers that the attachment "Instructions for filling out the monitoring report form" at the end of template "Monitoring report form (Version 08.0)" /2.4/ has been followed. Relevant information was provided by the project participant in the applicable Monitoring Report sections.
Findings	CAR #1 was raised and resolved.
Conclusion	Applus+ Certification confirms that the monitoring report is in compliance with the relevant valid form and instructions therein as accordance to "Clean Development Mechanism Validation and Verification Standard for Project Activity" (CDM- VVS for PA) v02.0 §§ 352-353.

E.2. Remaining forward action requests from validation and/or previous verifications

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This is first periodic verification of the project under the third crediting period. There are no pending issues from the validation/1.3/ or the previous verification/1.8/. This was verified and confirmed from the project documents on the UNFCCC project webpage /1.4/.

E.3. Compliance of the project implementation and operation with the project design document

Means of verification	The project activity was fully implemented according to the description presented in the final approved PDD /1.9/ .The assessment team confirms, through the remote assessment and real-time photographs that all physical features of the proposed CDM project activity including data collecting systems and storage have been implemented in accordance with the final PDD /1.9/ as mentioned above. The project activity was commissioned on 31/03/2006 with an installed capacity of 7.5 MW; the same is verified through the commissioning certificate/3.1/. During the remote assessment, the assessment team verified the technology used and the capacity of equipments implemented at the project site through remote assessment, desk review of documents and evidences such as photos and videos/6.2/ and it can be confirmed that there are no changes in the project design against the project design document and approved PDD. No events or situations that may impact the applicability of the methodology occurred during this monitoring period, which was confirmed by checking the operational/shut down details /3.8/ and interviewing the PP. There were no changes in the project activity from the previous verifications /1.8/. The monitoring report version 03 dated 11/09/2021 /1.5/ for the current monitoring period (from 01/03/2020 to 31/12/2020) is in compliance with the monitoring plan of the final PDD. The data and variables provided in the monitoring report is the same as that stated in the monitoring plan of the final approved PDD/.

Findings	No non-conformability was observed during assessment for implementation of project activity against the description presented in the approved PDD/1.2/.
Conclusion	Applus+ Certification confirms that the implementation of project activity is in compliance with the CDM requirement stipulated under CDM-VVS for PA v02.0 §§ 354-356. i. The implementation and operation of the project activity has been conducted in accordance with the description contained in the and approved PDD/1.9/. ii. By means of a remote assessment and interview sessions, the verification team is able to confirm that all physical features (technology, project equipment, and monitoring and metering equipment) of the CDM project activity are in place and that the project participants have operated the project activity as per the approved PDD/1.9/. iii. No information with regard to data and variables was identified that may surpass the estimated quantity of ERs in the approved PDD/1.9/. iv. The emission reductions achieved during the current monitoring period are 32,183 tCO_2e lower than the estimated quantity (37,300 tCO_2e) in the approved PDD/1.9/ for the comparable period.

E.4. Post-registration changes

E.4.1. Temporary deviations from the monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents[1]

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There are no temporary deviations from the monitoring plan in approved PDD/1.9/ or applied methodology/2.3/ during the current monitoring period. It was verified and confirmed from the Monitoring Report/1.7/, approved PDD/1.9/, UNFCCC project webpage/1.4/ and during remote assessment.

E.4.2. Corrections

>>
There are no corrections during the current monitoring period.

E.4.3. Changes to the start date of the crediting period

>>
There are no changes to the start date of crediting period identified during the current monitoring period. It was verified and confirmed from the UNFCCC project webpage/1.4/.

E.4.4. Inclusion of a monitoring plan

>>
There is no inclusion of a monitoring plan identified during the current monitoring period. It was verified and confirmed from the UNFCCC project webpage/1.4/.

E.4.5. Permanent changes from monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines or other methodological regulatory documents

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There are no permanent changes or deviation to the project activity during the current monitoring period.

However, PP has reported that during the previous monitoring period, there was a change in location of energy meters and this change was submitted to UNFCCC as PRC along with the previous verification.

[1] Other standards, methodologies, methodological tools and guidelines (to be) applied in accordance with the applied(selected) methodologies are collectively referred to as the other (applied) methodological regulatory documents).

The verification team referred to the final validated PRC-PDD and observed that there was a change in location of energy meters during the last monitoring period. This change has happened in line with the RE Regulations 2015 which states that "the main meter & check meter are to be located on all outgoing feeders at the generation station…". However, in the project activity energy meters were previously located at the RSEB govt. Electricity Board grid substation. Therefore, with reference to the RE Regulation 2015/6.6/, PP has submitted a petition at RERC (Petition No: RERC-556/15), RERC has directed DISCOM (RRVPNL) to follow the regulation and shift the energy meter on the outgoing feeder at the generator end. Hence, RRVPNL has installed new set of energy meters at plant premises switchyard as per the RERC order on 02/09/2016/6.7/. Also, due to the change of energy meter location, there was change in energy meters (replacement with new meters) also. These change in meter details are reported in the relevant section of the MR.

Due to change of energy meter location, the only influence is on the "line losses", which is no longer exist in the procedure of JMR preparation by RRVPNL. The JMR preparation and its calculation is not under the purview of PP, it is solely under the control of RSEB. Also, PP needs to consider the JMR as the final source for energy delivered to grid. Hence, for PP the source of energy delivered to grid was JMR and still the JMR only. PP has no control over RERC & RRVPNL or such government procedure.

Thus, there was a permanent change in the location of energy meter and due to these changes the monitoring plan has been revised appropriately in revised PDD during PRC along with the last request for issuance submitted to UNFCCC. This permanent change was approved by UNFCCC on 21 April 2021 (PRC-0347-001)/1.4/.

The verification team has referred to the PRC-PDD and verified the current monitoring period in line with the revision adopted in the approved PRC.

E.4.6. Changes to the project design

>>
There is no change to project design of the project activity identified during the current monitoring period. It was verified and confirmed from the Monitoring Report/1.5/, PDD/1.2/ and approved PDD/1.9/, UNFCCC project webpage /1.4/ and remote verification audit and call/6.1/&/6.2/.

E.4.7. Changes specific to afforestation and reforestation project activities

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Not Applicable

E.5. Compliance of the monitoring plan with applied methodologies, applied standardized baselines, and other applied methodological regulatory documents

Means of verification	The review of applied methodology and monitoring plan establishes that the monitoring plan presented in the PDD is consistent the approved AMS-I.D. Version 18 – "Grid connected renewable electricity generation" /2.3/.
Findings	CL#1 was raised and resolved.
Conclusion	Applus+ Certification confirms that the monitoring plan is in accordance with the approved methodology /2.3/ and correctly applied by the CDM project activity in line with the PRC PDD and CDM-VVS for PA v02.0 §§ 357-359 have been met.

E.6. Compliance of monitoring activities with the monitoring plan

E.6.1. Data and parameters fixed ex ante or at renewal of crediting period

Operating Margin for the NEWNE grid

Means of verification	The parameter $\mathbf{EG_{OM,y}}$ for the regional electricity NEWNE grid is been referred from the approved PDD/1.9/ which is calculated in line with the guidance provided in the selected methodology ex-ante. The value of 'Operating margin CO2 emission factor for the year y' is obtained from an authorized source i.e. CEA database version 14.0/6.3/. The reported value is 0.9610 tCO_2/MWh which is been

	verified and considered appropriately in the MR/1.5/.
Findings	CL #5 was raised and resolved.
Conclusion	Value of parameter reported in the monitoring report /1.5/ and corresponding emission reduction calculations spreadsheet /4.4/ are consistent with the approved PDD/1.9/. The applied values are correct and justified. Applus+ Certification confirms that the data and parameters fixed ex-ante have been correctly listed.

Build Margin of the NEWNE grid

Means of verification	The parameter $\mathbf{EG_{BM,y}}$ for the regional electricity NEWNE grid is been referred from the approved PDD/1.9/ which is calculated in line with the guidance provided in the selected methodology ex-ante. The value of 'Build margin CO2 emission factor for the year y' is obtained from an authorized source i.e. CEA database version 14.0/6.3/. The reported value is 0.8600 tCO2/MWh which is been verified and considered appropriately in the MR/1.5/.
Findings	CL #5 was raised and resolved.
Conclusion	Value of parameter reported in the monitoring report /1.5/ and corresponding emission reduction calculations spreadsheet /4.4/ are consistent with the approved PDD/1.9/. The applied values are correct and justified. Applus+ Certification confirms that the data and parameters fixed ex-ante have been correctly listed.

CO_2 emission factor of the NEWNE grid electricity in year y

Means of verification	The parameter $\mathbf{EG_{CO2,grid,CM,,y}}$ for the regional electricity NEWNE grid is been referred from the approved PDD/1.9/ which is calculated in line with the guidance provided in the selected methodology ex-ante. The values used for calculation of the baseline emission factor using combined margin approach are considered from an authorized source i.e. CEA database version 14.0/6.3/ applying default weights of 25 % for the operating margin and 75 %for build margin. The reported value is 0.88525 tCO2/MWh which is been verified and considered appropriately in the MR/1.7/.
Findings	CL #5 was raised and resolved.
Conclusion	Value of parameter reported in the monitoring report /1.5/ and corresponding emission reduction calculations spreadsheet /4.4/ are consistent with the approved PDD/1.9/. The applied values are correct and justified. Applus+ Certification confirms that the data and parameters fixed ex-ante have been correctly listed.

E.6.2. Data and parameters monitored

Parameter 1: Quantity of net electricity supplied to the grid in year *y;* $\mathbf{EG_{BL,y}}$

Means of verification	The monitoring of reductions in GHG emissions resulting from the project have been implemented in accordance with the monitoring plan contained in the PDD/1.9/. The monitoring mechanism, including the data collection system, is effective and reliable. During the remote assessment, personnel involved at various levels of operation of the project activity have been interviewed. It has been confirmed that the O&M personnel from the plant are conscious of the importance of the monitoring activities. The verification of 'Quantity of net electricity supplied to the grid in year y'; $EG_{BL,y}$ is done during the remote assessment.

Monitoring Report, onsite checks / Revised Monitoring Plan & Approved Methodology y	Requirement in the applicable methodology and relevant EB Documents	Requirement in the revised monitoring plan (Revised PDD monitoring Plan)	Means of Verification (MR/1.5/ and ER calculation in excel sheet /4.3/ check and consistency with actual monitoring practice at project site)	DOE Conclusion
Data/Parameter	$EG_{BL,y}$	$EG_{BL,y}$	$EG_{BL,y}$	This is in compliance with the applicable methodology and monitoring plan.
Description	Quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in year *y* (MWh)	Quantity of net electricity supplied to the grid in year *y*	Quantity of net electricity supplied to the grid in year *y*	The net power exported to the grid is equivalent to the amount of electricity supplied to the grid. Hence, this is in compliance with the applicable methodology and monitoring plan.
Measured/Calculated /Default	Measured	Measured	Measured and calculated based on measured parameters.	The meters installed at the site directly measure the exported and imported electricity. EGy, (net electricity exported to the grid) is the simple difference of these

					two directly measured values. Hence this is in compliance with the applicable methodology and monitoring plan.
	Source of data	On site measurement	Joint Meter Reading (Electronically archived)	Joint Meter Reading of SCPL signed by RRVPNL authority/3.3/	More specific information is provided. This is in compliance with the applicable methodology and monitoring plan.
	Monitoring equipment	Energy meter	Energy meter	Energy meter	This is in compliance with the applicable methodology and monitoring plan.
	Measuring/Reading/ Recording frequency	Monthly	Data will be monitored continuously through DCS (Distribution Control System).	Daily shift wise recording in Daily generation data /3.4/	The monitoring frequency for parameters $EG_{BL,y}$ is exactly same as mentioned in approved PDD. This is in compliance with the applicable methodology and monitoring plan.
	Calculation method (if applicable)	Measurements are undertaken using energy meters	Not Applicable as this is a measured parameter	$EG_{BL,y}$ = (Electricity exported to the grid – Electricity imported from grid)	More specific information is provided. This parameter

<table>
<tr><td></td><td></td><td></td><td></td><td></td><td>is calculated based on the measured parameter. This is in compliance with the applicable methodology and monitoring plan.</td></tr>
<tr><td></td><td>QA/QC procedures</td><td>Calibration should be undertaken as prescribed in the relevant paragraph of General Guidelines to SSC CDM Methodologies.</td><td>The meter reading is cross checked with the sales receipts of electricity. The meters installed are owned by the state utility and the meter is tri vector type of meter which can measure both export and import.</td><td>Annual calibration of energy meters by RRVPNL of both main and check meter, the calibration certificate issued by the RRVPNL authority /5.1/ is checked for cross-reference
<table>
<tr><th></th><th>Main meter</th><th>Check meter</th></tr>
<tr><td>Current Meters</td><td>RJB 89896</td><td>RJB898 97</td></tr>
<tr><td>Accuracy class</td><td>0.2</td><td>0.2</td></tr>
<tr><td>Calibration date</td><td>01/07/2019 22/06/2020</td><td>01/07/2019 22/06/2020</td></tr>
<tr><td>Valid till</td><td>01/07/2020 22/06/2021</td><td>01/07/2020 22/06/2021</td></tr>
</table></td><td>Measurement device is microprocessor type and to increase reliability calibration is done annually as per the PPA/3.2/</td></tr>
<tr><td></td><td>Value (s) of Monitored parameter</td><td>Not Specified</td><td>Not Specified</td><td>Month wise data is represented in the final ER sheet /4.3/ and total value across the monitoring period is reported in the MR /1.5/.

PP has applied the conservative value calculated from the monitoring parameters. As per prescribe equation of the registered PDD, $EG_{BL,y}$ is calculated as Export–Import, where Export = Gross generation (EG_{gross}) – Auxiliary consumption (EG_{aux}). Thus, value for net electricity $EG_{BL,y}$ is accounted as $EG_{gross} – EG_{aux} - EG_{import}$. The ER sheet has all these parameters and values. However, the value for $EG_{BL,y}$ directly taken from JMR is found to be the conservative value against the value calculated using the</td><td>The information flow (data generation, aggregation, recording, calculation and reporting) for the parameters to be monitored including its values in the final version of the MR/1.5/ and ER sheet /4.3/</td></tr>
</table>

				formula "EG_{gross} – EG_{aux} - EG_{import}". This value of $EG_{BL,y}$ is also consistent in the Sale invoice, which fulfils the source & cross check references of the parameter under B.7.1 of the registered PDD. The ER sheet (version 03) included both these values for $EG_{BL,y}$. Due to conservativeness the final value used for ER estimation is the minimum of the two values. The values reported in the ER are found to be correct and consistent with the source documents and raw data available at project site. Further, ER estimated is made based on the most conservative approach, hence accepted.	have been correctly reported and confirmed by the assessment team.
Findings	CL #4 and CL #6 and CAR #3 were raised and resolved.				
Conclusion	Applus+ Certification confirms that the actual monitoring activities being performed on site are in compliance with the approved monitoring plan and the same is in line with the monitoring methodology /2.3/. The applicable parameter stated in the approved monitoring plan and the applied methodology/2.3/ have been sufficiently monitored. The responsibilities and authorities for monitoring and reporting are in accordance with what is stated in the approved PDD/1.9/. The information flow (data generation, aggregation, recording, calculation and reporting) for the parameters to be monitored including its values in the final version of the MR/1.5/ have been correctly reported and confirmed. Hence, the requirement of CDM-VVS for v02.0 §§ 360-364 have been met.				

Parameter 2: Quantity of gross electricity supplied to the grid in year *y*

Means of verification	The monitoring of reductions in GHG emissions resulting from the project have been implemented in accordance with the monitoring plan contained in the approved PDD/1.9/ and. The monitoring mechanism, including the data collection system, is effective and reliable. During the remote assessment, personnel involved at various levels of operation of the project activity have been interviewed. It has been confirmed that the O&M personnel from the plant are conscious of the importance of the monitoring activities. The verification of the Quantity of gross electricity supplied to the grid in year y; EG_{gross} was done during the remote assessment.				
	Monitoring Report, onsite checks / **Revised Monitoring Plan & Approved Methodology y**	**Requirement in the applicable methodology and relevant EB Documents**	**Requirement in the revised monitoring plan (Revised PDD monitoring Plan)**	**Means of Verification (MR/1.5/ and ER calculation in excel sheet /4.3/ check and consistency with actual monitoring practice at project site)**	**DOE Conclusion**

	Data/Parameter	Not Specified	EG_{gross}	EG_{gross}	This is in compliance with the applicable methodology and monitoring plan.
	Description	Not Specified	Quantity of gross electricity supplied to the grid in year y	Quantity of gross electricity supplied to the grid in year y	The Gross electricity supplied is the overall electricity generated by the project activity. When Auxiliary consumption is subtracted from this, it gives electricity exported by the project activity.
	Measured/Calculated /Default	Not Specified	Measured	Measured.	The meters installed at the site directly measures the gross electricity generated.
	Source of data	Not Specified	Log book record (manually and Electronically archived).	Log book record/3.5/	This is in compliance with the applicable methodology and monitoring plan.
	Monitoring equipment	Not Specified	Energy meter	Energy meter	This is in compliance with the applicable methodology and monitoring plan.
	Measuring/ Reading/ Recording frequency	Not Specified	Data will be monitored continuously.	Continuously monitored and Shift wise recorded in daily Generation data/3.4/	This is in compliance with the applicable methodology and monitoring

					plan.
	Calculation method (if applicable)	Not Specified	Not Applicable as this is a measured parameter	Measured directly	This is in compliance with the applicable methodology and monitoring plan.
	QA/QC procedures	Applied methodology does not provide any details.	The meter reading is cross checked with the sales receipts of electricity. The meters installed are owned by the state utility and the meter is tri vector type of meter which can measure both export and import.	Annual calibration certificate issued by RRVNPL/5.2/. Serial no. 4223178 Accuracy 0.5 Calibration dates 01/07/2019 22/06/2020 Valid till 01/07/2020 22/06/2021	Methodology does not provide any specifications; this is as per actual practice. But, this is in line with the general CDM requirements.
	Value (s) of Monitored parameter	Not Specified	Not Specified	Month wise data is presented in the ER sheet and total value across the monitoring period has been reported in the MR /1.5/. The values are found to be correct and consistent with raw data available during verification.	The information flow (data generation, aggregation, recording, calculation and reporting) for the parameters to be monitored including its values in the final version of the MR/1.5/ and ER sheet /4.3/ have been correctly reported and confirmed by the assessment team.
Findings	CL #1, CL #2 and CL #6 were raised and resolved.				
Conclusion	Applus+ Certification confirms that the actual monitoring activities being performed on site are in compliance with the approved monitoring plan and the same is in line with the monitoring				

	methodology /2.3/. The applicable parameter stated in the approved monitoring plan and the applied methodology/2.3/ have been sufficiently monitored. The responsibilities and authorities for monitoring and reporting are in accordance with what is stated in the approved PDD/1.9/. The information flow (data generation, aggregation, recording, calculation and reporting) for the parameters to be monitored including its values in the final version of the MR/1.7/ have been correctly reported and confirmed. Hence, the requirement of CDM-VVS for v02.0 §§ 360-364 have been met.

Parameter 3: Quantity of gross electricity used for auxiliary consumption in year *y*

Means of verification

The monitoring of reductions in GHG emissions resulting from the project have been implemented in accordance with the monitoring plan contained in the approved PDD/1.9/. The monitoring mechanism, including the data collection system, is effective and reliable. During the remote assessment, personnel involved at various levels of operation of the project activity have been interviewed. It has been confirmed that the O&M personnel from the plant are conscious of the importance of the monitoring activities. The verification of the Quantity of electricity used for auxiliary consumption in year *y*; EG_{Aux} was done during the remote assessment.

Monitoring Report, On site checks / Revised Monitoring Plan & Approved Methodology	**Requirement in the applicable methodology and relevant EB Documents**	**Requirement in the revised monitoring plan (Revised PDD monitoring Plan)**	**Means of Verification (MR/1.5/ and ER calculation in excel sheet /4.3/ check and consistency with actual monitoring practice at project site)**	**DOE Conclusion**
Data/Parameter	Not Specified	EG_{Aux}	EG_{Aux}	This is in compliance with the applicable methodology and monitoring plan.
Description	Not Specified	Quantity of electricity used for auxiliary consumption in year *y*	Quantity of electricity used for auxiliary consumption in year *y*	This is in compliance with the applicable methodology and monitoring plan.
Measured/ Calculated /Default	Not Specified	Measured	Measured.	The meters installed at the site directly measure the Auxiliary consumption. Hence this is in compliance with the

				applicable methodology and monitoring plan.
Source of data	Not Specified	Log book record (manually and Electronically archived).	Log book record/3.5/	More specific information is provided. This is in compliance with the applicable methodology and monitoring plan.
Monitoring equipment	Not Specified	Energy meter	Energy meter	This is in compliance with the applicable methodology and monitoring plan.
Measuring/ Reading/ Recording frequency	Not Specified	Data will be monitored continuously .	Continuously monitored and Shift wise recorded in daily Generation data/3.4/	This is in compliance with the applicable methodology and monitoring plan.
Calculation method (if applicable)	Not Specified	Not Applicable as this is a measured parameter	Measured directly	More specific information is provided. This parameter is calculated based on the measured parameter. This is in compliance with the applicable methodology and monitoring plan.
QA/QC procedures	Applied methodology does not provide any details.	The meter reading is cross checked with the sales receipts of electricity. The meters	The annual calibration is done as par PPA/3.2/. Calibration certificate is issued by RRVNPL/5.2/ Serial no. 10-05-UNI-6756 Accuracy 1.0	Methodology does not provide any specifications; this is as per actual practice. But, this is in line with the

			installed are owned by the state utility and the meter is tri vector type of meter which can measure both export and import.	Calibration dates: 01/07/2019 22/06/2020 Valid till: 01/07/2020 22/06/2021	general CDM requirements.
	Value (s) of Monitored parameter	Not Specified	Not Specified	Month wise data is presented in ER sheet /4.3/ and total value across the monitoring period has been reported MR /1.5/. The values are found to be correct and consistent with raw data available at project site.	The information flow (data generation, aggregation, recording, calculation and reporting) for the parameters to be monitored including its values in the final version of the MR/1.7/ and ER sheet /4.4/ have been correctly reported and confirmed by the assessment team.
Findings	CL #2, CL #2 and CAR #2 were raised and resolved.				
Conclusion	Applus+ Certification confirms that the actual monitoring activities being performed on site are in compliance with the approved monitoring plan and the same is in line with the monitoring methodology /2.3/. The applicable parameter stated in the approved monitoring plan and the applied methodology/2.3/ have been sufficiently monitored. The responsibilities and authorities for monitoring and reporting are in accordance with what is stated in the approved PDD/1.9/. The information flow (data generation, aggregation, recording, calculation and reporting) for the parameters to be monitored including its values in the final version of the MR/1.5/ have been correctly reported and confirmed. Hence, the requirement of CDM-VVS for v02.0 §§ 360-364 have been met.				

Parameter 4: Electricity imported from the grid in year *y*

Means of verification	The monitoring of reductions in GHG emissions resulting from the project have been implemented in accordance with the monitoring plan contained in the PDD/1.9/. The monitoring mechanism, including the data collection system, is effective and reliable. During the remote assessment, personnel involved at various levels of operation of the project activity have been interviewed. It has been confirmed that the O&M personnel from the plant are conscious of the importance of the monitoring activities. The verification of the electricity imported from the grid in year y.; EG_{import} was done during the remote assessment.

Monitoring Report, onsite checks / Revised Monitoring Plan & Approved Methodology y	Requirement in the applicable methodology and relevant EB Documents	Requirement in the revised monitoring plan (Revised PDD monitoring Plan)	Means of Verification (MR/1.5/ and ER calculation in excel sheet /4.3/ check and consistency with actual monitoring practice at project site)	DOE Conclusion
Data/Parameter	Not Specified	EG_{import}	EG_{import}	This is in compliance with the applicable methodology and monitoring plan.
Description	Not Specified	Electricity imported from the grid in year y	electricity imported from the grid in year y	This is in compliance with the applicable methodology and monitoring plan..
Measured/Calculated /Default	Not Specified	Measured	Measured and calculated based on measured parameters.	This is in compliance with the applicable methodology and monitoring plan..
Source of data	Not Specified	Log book record (manually and Electronically archived).	Log book record /3.5/	The meters installed at the site directly measure the Imported electricity. Hence this is in compliance with the applicable methodology and monitoring plan. Cross-checked with

<table>
<tr><td></td><td></td><td></td><td></td><td></td><td>JMR/3.3/</td></tr>
<tr><td></td><td>Monitoring equipment</td><td>Not Specified</td><td>Energy meter</td><td>The annual calibration is done as par PPA/3.2/. Calibration certificate is issued by RRVNPL/5.2/
<table><tr><td></td><td>Main meter</td><td>Check meter</td></tr><tr><td>Current Meters</td><td>RJB 89896</td><td>RJB898 97</td></tr><tr><td>Accuracy class</td><td>0.2</td><td>0.2</td></tr><tr><td>Calibration date</td><td>01/07/2019 22/06/2020</td><td>01/07/2019 22/06/2020</td></tr><tr><td>Valid till</td><td>01/07/2020 22/06/2021</td><td>01/07/2020 22/06/2021</td></tr></table></td><td>This is in compliance with the applicable methodology and monitoring plan.</td></tr>
<tr><td></td><td>Measuring/ Reading/ Recording frequency</td><td>Not Specified</td><td>Continuous</td><td>Continuously monitored and Shift wise recorded in daily Generation data/3.4/</td><td>This is not specified in the applicable methodology and monitoring plan. However, the data is measured as per actual practice followed at site.</td></tr>
<tr><td></td><td>Calculation method
(if applicable)</td><td>Not Specified</td><td>Not Applicable as this is a measured parameter</td><td>Measured directly</td><td>This is not specified in the applicable methodology and monitoring plan. However, the data is measured as per actual practice followed at site.</td></tr>
<tr><td></td><td>QA/QC procedures</td><td>Applied methodology does</td><td>The meter reading is cross</td><td>The annual calibration is done as par PPA/3.2/. Calibration certificate is issued by</td><td>Methodology does not</td></tr>
</table>

		not provide any details.	checked with the sales receipts of electricity. The meters installed are owned by the state utility and the meter is tri vector type of meter which can measure both export and import.	RRVNPL/5.1/	provide any specifications; this is as per actual practice. But, this is in line with the general CDM requirements.
	Value (s) of Monitored parameter	Not Specified	Not Specified	Month wise data is presented in the ER sheet/4.3/ and the total value across the monitoring period MR /1.5/ and ER sheet /4.3/. The values are found to be correct and consistent with raw data available at project site.	The information flow (data generation, aggregation, recording, calculation and reporting) for the parameters to be monitored including its values in the final version of the MR/1.5/ and ER sheet /4.3/ have been correctly reported and confirmed by the assessment team.
Findings	CL #1 and CL #6 were raised and resolved.				
Conclusion	Applus+ Certification confirms that the actual monitoring activities being performed on site are in compliance with the approved monitoring plan and the same is in line with the monitoring methodology /2.3/. The applicable parameter stated in the approved monitoring plan and the applied methodology/2.3/ have been sufficiently monitored. The responsibilities and authorities for monitoring and reporting are in accordance with what is stated in the approved PDD/1.9/. The				

	information flow (data generation, aggregation, recording, calculation and reporting) for the parameters to be monitored including its values in the final version of the MR/1.5/ have been correctly reported and confirmed. Hence, the requirement of CDM-VVS for v02.0 §§ 360-364 have been met.

Parameter 5: Quantity of biomass consumed in year *y*

Means of verification

The monitoring of reductions in GHG emissions resulting from the project have been implemented in accordance with the monitoring plan contained in the approved PDD/1.9/. The monitoring mechanism, including the data collection system, is effective and reliable. During the remote assessment, personnel involved at various levels of operation of the project activity have been interviewed. It has been confirmed that the O&M personnel from the plant are conscious of the importance of the monitoring activities. The verification of the Quantity of biomass consumed in year *y*; $\mathbf{M_{biomass,y}}$, was done during the remote assessment.

Monitoring Report, onsite checks / **Revised Monitoring Plan & Approved Methodology y**	**Requirement in the applicable methodology and relevant EB Documents**	**Requirement in the revised monitoring plan (Revised PDD monitoring Plan)**	**Means of Verification (MR/1.5/ and ER calculation in excel sheet /4.3/ check and consistency with actual monitoring practice at project site)**	**DOE Conclusion**
Data/Parameter	Not Specified	$M_{biomass,y}$	$M_{biomass,y}$	This is in compliance with the applicable methodology and monitoring plan.
Description	Quantity of biomass consumed in year y	Quantity of biomass consumed in year *y*	Quantity of biomass consumed in year *y*	This is in compliance with the applicable methodology and monitoring plan.
Measured/Calculated /Default	Measured	Measured	Measured	This is in compliance with the applicable methodology and monitoring plan.
Source of data	On site measurement	load cell available on belt conveyor (Archived on paper)	Load cell available on belt conveyor, Data aggregated on monthly basis represented in ER Sheet /4.3/	More specific information is provided. This is in compliance with the

				applicable methodology and monitoring plan.
Monitoring equipment	Not specified	load cell available on belt conveyor	Load cell available on belt conveyor. Annual calibration conducted by third party agency C & I calibration Pvt. Ltd Serial no. 1798 Accuracy 0.1 ton Calibration dates 03/08/2019 20/07/2020 Valid till 03/08/2020 20/07/2021	This is in compliance with the applicable methodology and monitoring plan.
Measuring/ Reading/ Recording frequency	Continuously and estimate using annual energy/mass balance.	Monitoring of biomass will be continuous and aggregated monthly.	Aggregated Monthly /4.4/	This is in compliance with the applicable methodology and monitoring plan.
Calculation method (if applicable)	Not Applicable as this a measured parameter	All the biomass is weighed at the load cell available on belt conveyor installed at the factory. The load cell is used daily to measure the exact weight of biomass purchased. And the same reading is transferred to SCPL office for the regular data record	Not Applicable as this a measured parameter	Not Applicable.
QA/QC procedures	Applied methodology does not	Internal QA /QC procedure	The On Line Weighing System (belt conveyer) has been calibrated	Methodology does not provide any

		provide any details.	are available at the project site and same is being followed for data monitoring and archiving.	twice in this monitoring period by a third party. The data can be cross checked with the biomass procurement data /3.11/.	specificatio ns; this is as per actual practice. But, this is in line with the general CDM requirement s.
	Value (s) of Monitored parameter	Not Specified	Not Specified	The total quantity of biomass consumption has been reported in the MR/1.5/. During the verification audit and desk review it was verified that in the current monitoring period only mustard husk was used as biomass fuel across all the months which accounts 100% of the total consumption. The types of biomass and month wise quantity are reported in the final ER sheet & in the final MR, under the section D and Appendix 1. The values are found to be correct and consistent with raw data available at project site, supported by the documentary evidence.	The information flow (data generation, aggregation , recording, calculation and reporting) for the parameters to be monitored including its values in the final version of the MR/1.7/ have been correctly reported and confirmed by the assessment team.

Findings	CL#4 was raised and resolved.
Conclusion	Applus+ Certification confirms that the actual monitoring activities being performed on site are in compliance with the approved monitoring plan and the same is in line with the monitoring methodology /2.3/. The applicable parameters stated in the revised monitoring plan/1.7/ and the applied methodology/2.3/ have been sufficiently monitored. The responsibilities and authorities for monitoring and reporting are in accordance with what is stated in the approved PDD monitoring plan/1.9/. The information flow (data generation, aggregation, recording, calculation and reporting) for the parameters to be monitored including its values in the final version of the MR/1.5/ have been correctly reported and confirmed. Hence, the requirement of CDM-VVS for v02.0 §§ 360-364 have been met.

Parameter 6: Moisture content of the biomass (wet basis)

Means of verificatio	The monitoring of reductions in GHG emissions resulting from the project have been implemented in accordance with the monitoring plan contained in the approved PDD/1.2/. The

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monitoring mechanism, including the data collection system, is effective and reliable. During the remote assessment, personnel involved at various levels of operation of the project activity have been interviewed. It has been confirmed that the O&M personnel from the plant are conscious of the importance of the monitoring activities. The verification of the Moisture content of the biomass (wet basis).; $W_{biomass}$ was done during remote assessment.

Monitoring Report, onsite checks / **Revised Monitoring Plan & Approved Methodology**	**Requirement in the applicable methodology and relevant EB Documents**	**Requirement in the revised monitoring plan (Revised PDD monitoring Plan)**	**Means of Verification (MR/1.5/ and ER calculation in excel sheet /4.3/ check and consistency with actual monitoring practice at project site)**	**DOE Conclusion**
Data/Parameter	Not specified	$W_{biomass}$	$W_{biomass}$	This is in compliance with the applicable methodology and monitoring plan.
Description	Moisture content of the biomass (wet basis)	Moisture content of the biomass (wet basis)	Moisture content of the biomass (wet basis)	This is in compliance with the applicable methodology and monitoring plan.
Measured/ Calculated/ Default	Measured	Measured	Measured	This is in compliance with the applicable methodology and monitoring plan.
Source of data	On site measurement	Laboratory Log Books	Laboratory Log Books/3.13/	More specific information is provided. This is in compliance with the applicable methodology and monitoring plan.
Monitoring	Not specified	Digital Electronic	Digital Electronic Balance and the weighing	This is in compliance

	equipment		Balance, weighing balance	balance. Annual calibration conducted by third party agency C & I calibration Pvt. Ltd Digital Electronic Balance: Serial no. 50460757 Accuracy 0.1 mg Calibration dates 03/08/2019 20/07/2020 Valid till 03/08/2020 20/07/2021 Hot Air Oven: Serial no. CPL/HAO-01 Accuracy 0.1 C Calibration dates 02/08/2019 20/07/2021 Valid till 02/08/2020 20/07/2021	with the applicable methodology and monitoring plan.
	Measuring/ Reading/ Recording frequency	Not specified	Not Applicable	Not Applicable	This is in compliance with the applicable methodology and monitoring plan.
	Calculation method **(if applicable)**	The moisture content of biomass of homogeneous quality shall be determined ex ante. The weighted average should be calculated and used in the calculations	The biomass residue will be tested internal SCPL laboratory by moisture testing procedure which is as follows: W1 (weight of empty dish) = x gm W2 (weight of dish+ sample) = y gm The y gm sample taken in hot air oven at	The moisture content of biomass is obtained by the formula; Moisture = (W2-W3) x 100/ (W2-W1)	According to the applicable methodology the value should be determined ex-ante, estimates to be provide in PDD and shall be used in the monitoring period, however the PP has used equipment on site to get more accurate value.

			110±50C for 25 to 30 minutes then it is cooled in desicator for 10 mins. W3 (weight of W2 sample after 10 minutes cooling) = z gm Moisture = (W2-W3) x 100/ (W2-W1)		
	QA/QC procedures	Applied methodology does not provide any details.	The procedure is cross checked against bomb calorimeter at a regular interval of 1 week to get calibrated by pre-determined standard test weight method.	The measuring instruments; Digital Electronic Balance, weighing balance, hot air oven have been calibrated twice in the current monitoring period by a third party, verified by the calibration certificate issued/5.3/	Methodology does not provide any specification; this is as per actual practice. But, this is in line with the general CDM requirements.
	Value (s) of Monitored parameter	Not Specified	Not Specified	Monthly data are reported in the ER sheet, separately for both the biomass types wherever applicable. The average value across the monitoring period has been reported in the MR parameter section. The monthly reported values are the tested results of the homogeneous biomass mixture of each biomass type, tested separately. The values are found to be correct and consistent with raw data available at project site.	The information flow (data generation, aggregation, recording, calculation and reporting) for the parameters to be monitored is confirmed by the assessment team.
Findings	CL#4 was raised and resolved.				
Conclusion	Applus+ Certification confirms that the actual monitoring activities observed on site are in compliance with the approved monitoring plan and the same is in line with the monitoring methodology /2.3/. The applicable parameters stated in the revised monitoring plan/1.5/ and the applied methodology/2.3/ have been sufficiently monitored.				

	The responsibilities and authorities for monitoring and reporting are in accordance with what is stated in the approved PDD monitoring plan/1.9/. The information flow (data generation, aggregation, recording, calculation and reporting) for the parameters to be monitored including its values in the final version of the MR/1.5/ have been correctly reported and confirmed. Hence, the requirement of CDM-VVS for v02.0 §§ 360-364 have been met.

Parameter 7: Net calorific value of biomass type *k*

Means of verification

The monitoring of reductions in GHG emissions resulting from the project have been implemented in accordance with the monitoring plan contained in the approved PDD/1.9/.The monitoring mechanism, including the data collection system, is effective and reliable. During the remote assessment, personnel involved at various levels of operation of the project activity have been interviewed. It has been confirmed that the O&M personnel from the plant are conscious of the importance of the monitoring activities. The on-site verification of the Net calorific value of biomass type *k*.; $NCV_{k,y}$ was done during the remote assessment.

Monitoring Report, onsite checks / **Revised Monitoring Plan & Approved Methodology y**	**Requirement in the applicable methodology and relevant EB Documents**	**Requirement in the revised monitoring plan (Revised PDD monitoring Plan)**	**Means of Verification (MR/1.5/ and ER calculation in excel sheet /4.3/ check and consistency with actual monitoring practice at project site)**	**DOE Conclusion**
Data/Parameter	Not specified	$NCV_{k,y}$	$NCV_{k,y}$	This is in compliance with the applicable methodology and monitoring plan.
Description	Net calorific value of biomass type k	Net calorific value of biomass type *k*	Net calorific value of biomass type *k*	This is in compliance with the applicable methodology and monitoring plan.
Measured/Calculated /Default	Measured	Measured and Calculated	Measured and Calculated	This is in compliance with the applicable methodology and monitoring plan.
Source of data	Not specified	Laboratory record (Archived on paper)	Laboratory Record/3.13/	More specific information is provided. This is in compliance

				with the applicable methodology and monitoring plan.
Monitoring equipment	Not specified	Bomb calorimeter	Bomb calorimeter. Annual calibration conducted by a third agency C & I Calibrations Pvt. Ltd. Serial no. 3284 Accuracy 0.1 Calibration dates 02/08/2019 20/07/2020 Valid till 02/08/2020 20/07/2021	This is in compliance with the applicable methodology and monitoring plan.
Measuring/ Reading/ Recording frequency	Determine once in the first year of the crediting period	Fortnightly	Fortnightly	According to methodology the NCV shall be measured quarterly, taking at least three samples for each measurement. The average value can be used for the rest of the crediting period; However the PP has calculated the NCV of biomass each fortnight of monitoring period; resulting in better accuracy. It is cross-

				checked with laboratory record/3.*/
Calculation method (if applicable)	Not Applicable as this is a measured parameter	NCV = 2332 x Temperature x 30.32/ weight of the sample 2332 = water equivalent weight 30.32 = calorific value of Nicrom wire and calorific value of cotton thread. Water equivalent = HxMx(CVt+CV w)/T Where: H = Calorific value of Benzoic acid in cal/gm M = Mass of sample in gm CVt = calorific value of thread (per cm = 2.1 cal) CVw = calorific value of ignition wire (per cm = 2.331 cal) T = final rise in temperature	Formula based calculation as explained in PDD/1.2/ is done and recorded in laboratory log book/3.13/	Calculation is done every fortnight hence, this is in compliance with the applicable methodology and monitoring plan.
QA/QC procedures	Applied methodology does not provide any details.	Internal QA /QC procedure are available at the project site and being followed for data monitoring and archiving.	Bomb Calorimeter used in the calculation of NCV of fuel has been calibrated twice in the current monitoring period. The Calibration certificates issued by third party have been provided/5.3/	Methodology does not provide any specifications; this is as per actual practice. But, this is in line with the general CDM requirements.
Value (s) of Monitored parameter	Not Specified	Not Specified	NCV is represented in MR /1.5/. Monthly data are reported in the ER	The information flow (data generation,

			sheet, separately for each type of biomass consumed and the average value across the monitoring period has been reported in the MR parameter section. The monthly reported values are the tested results of the homogeneous biomass mixture of each biomass type, tested separately. The value is found to be correct and consistent with raw data available at project site.	aggregation , recording, calculation and reporting) for the parameters to be monitored including its values in the final version of the MR/1.7/ has been correctly reported and confirmed by the assessmen t team.

Findings	CL#4, CL#5 and CL#7 were raised and resolved.
Conclusion	Applus+ Certification confirms that the actual monitoring activities observed on site are in compliance with the approved monitoring plan and the same is in line with the monitoring methodology /2.3/. The applicable parameters stated in the revised monitoring plan/1.7/ and the applied methodology/2.3/ have been sufficiently monitored. The responsibilities and authorities for monitoring and reporting are in accordance with what is stated in the approved PDD monitoring plan/1.9/. The information flow (data generation, aggregation, recording, calculation and reporting) for the parameters to be monitored including its values in the final version of the MR/1.5/ have been correctly reported and confirmed. Hence, the requirement of CDM-VVS for v02.0 §§ 360-364 have been met.

Parameter 8: Quantity of fossil fuel consumed in year *y*

Means of verification	The monitoring of reductions in GHG emissions resulting from the project have been implemented in accordance with the monitoring plan contained in the approved PDD/1.2/. The monitoring mechanism, including the data collection system, is effective and reliable. During the remote assessment, key person involved at various levels of operation of the project activity had been interviewed. It has been confirmed that the O&M personnel from the plant are conscious of the importance of the monitoring activities. The verification of the Quantity of fossil fuel consumed in year *y*.; **$FC_{i,j,y}$** was done during the remote assessment.

Monitoring Report, onsite checks / **Revised**	**Requirement in the applicable methodology and relevant EB Documents**	**Requirement in the revised monitoring plan (Revised PDD monitoring Plan)**	**Means of Verification (MR/1.5/ and ER calculation in excel sheet /4.3/ check and consistency with actual monitoring**	**DOE Conclusion**

	Monitoring Plan & Approved Methodology y			**practice at project site)**	
	Data/Parameter	Amount of fossil fuel	$FC_{i,j,y}$	$FC_{i,j,y}$	This is in compliance with the applicable methodology and monitoring plan.
	Description	Quantity of fossil fuel consumed in year y	Quantity of fossil fuel used for start-up of the plant	Quantity of diesel used for the project activity in year y.	This is in compliance with the applicable methodology and monitoring plan.
	Measured/Calculated /Default	Measured	Measured	Measured	This is in compliance with the applicable methodology and monitoring plan.
	Source of data	On site measurement	Log book maintained to record onsite consumption of diesel.	On site record of consumption of diesel.	More specific information is provided. This is in compliance with the applicable methodology and monitoring plan.
	Monitoring equipment	Not specified	Flow meter	Flow meter	This is in compliance with the applicable methodology and monitoring plan.
	Measuring/Reading/ Recording frequency	Not specified	Daily	The data is monitored continuously and aggregated monthly.	This is in compliance with the applicable methodology and monitoring plan.
	Calculation method (if applicable)	Not Applicable as this is a measured	Not Applicable as this is a measured	Not Applicable as this is a measured	Not Applicable.

	parameter	parameter	parameter	
QA/QC procedures	Applied methodology does not provide any details.	Internal QA /QC procedure are available at the project site and same is being followed for data monitoring and archiving.	No fossil fuel is consumed in the current monitoring period hence no QA/AC procedure is required.	Methodology does not provide any specifications; this is as per actual practice. But, this is in line with the general CDM requirements.
Value (s) of Monitored parameter	Not Specified	Not Specified	Month wise data provision is presented in the ER sheet and in the MR. But there was no fossil fuel consumed during the period. This is found to be correct and consistent with raw data available at project site.	The information flow (data generation, aggregation, recording, calculation and reporting) for the parameters to be monitored including its values in the final version of the MR/1.7/ and ER sheet /4.4/ have been correctly reported and confirmed by the assessment team.

Findings	CL#4 was raised and resolved.
Conclusion	Applus+ Certification confirms that the actual monitoring activities observed on site are in compliance with the approved monitoring plan and the same is in line with the monitoring methodology /2.3/. The project emissions calculated based on the amount of diesel consumed in standby DG set makes the emission reductions calculations conservative. However, from the assessment it was verified that no fossil fuel consumption was there during the period. The applicable parameters stated in the revised monitoring plan/1.9/ and the applied methodology/2.3/ have been sufficiently monitored. The responsibilities and authorities for monitoring and reporting are in accordance with what is stated in the approved PDD monitoring plan/1.2/ and revised PDD/1.9/. The information flow (data generation, aggregation, recording, calculation and reporting) for the parameters to be monitored including its values in the final version of the MR/1.5/ have been correctly reported and confirmed. Hence, the requirement of CDM-VVS for v02.0 §§ 360-364 have been met.

Parameter 9: Net calorific value of fossil fuel type *i*

Means of verification

The monitoring of reductions in GHG emissions resulting from the project have been implemented in accordance with the monitoring plan contained in the approved PDD/1.9/. The monitoring mechanism, including the data collection system, is effective and reliable. During the remote assessment, personnel involved at various levels of operation of the project activity have been interviewed. It has been confirmed that the O&M personnel from the plant are conscious of the importance of the monitoring activities. The verification of the Net calorific value of fossil fuel type *i*.; $NCV_{k,y}$

Monitoring Report, onsite checks / **Revised Monitoring Plan & Approved Methodology y**	**Requirement in the applicable methodology and relevant EB Documents**	**Requirement in the revised monitoring plan (Revised PDD monitoring Plan)**	**Means of Verification (MR/1.5/ and ER calculation in excel sheet /4.3/ check and consistency with actual monitoring practice at project site)**	**DOE Conclusion**
Data/Parameter	Not specified	$NCV_{i,y}$	$NCV_{i,y}$	This is in compliance with the applicable methodology and monitoring plan.
Description	Not specified	Net calorific value of fossil fuel type *i*	Net calorific value of fossil fuel type *i*	This is in compliance with the applicable methodology and monitoring plan.
Measured/Calculated /Default	Default	Default	Default	This is in compliance with the applicable methodology and monitoring plan.
Source of data	Not specified	2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2,Chapter 1, Table 1.2	The value is taken default from IPCC guideline/2.5/, as par with the applicable methodology	More specific information is provided. This is in compliance with the applicable methodology and monitoring plan.

Monitoring equipment	Not specified	Not applicable	Default value is taken.	This is in compliance with the applicable methodology and monitoring plan.
Measuring/Reading/ Recording frequency	Not specified	Not specified	Default value from IPCC guidelines.	This is in compliance with the applicable methodology and monitoring plan.
Calculation method (if applicable)	Not Applicable as this is a measured parameter	The net calorific value of diesel has been sourced from IPCC 2006 default value at the upper limit of the uncertainty at a 95% confidence interval and any future revision of the IPCC guidelines will be taken into account in determining the same.	Default value from IPCC guidelines/2.5/ .	Not Applicable.
QA/QC procedures	Applied methodology does not provide any details.	Project participants have no control on the parameter. Hence, No QA/QC procedures are applicable.	QA/QC procedures not applied as this is a default value from an authorized source	Methodology does not provide any specifications ; this is as per actual practice. But, this is in line with the general CDM requirements.
Value (s) of Monitored parameter	Not Specified	Not Specified	NCV is presented in MR /1.5/. The value is found to be correct and consistent with the and approved PDD.	The information flow (data generation, aggregation, recording, calculation and reporting) for the parameters to be monitored including its

					values in the final version of the MR/1.7/ and has been correctly reported and confirmed by the assessment team.

Findings	CL#4, CL#5 and CL#7 were raised and resolved
Conclusion	Applus+ Certification confirms that the actual monitoring activities observed on site are in compliance with the approved monitoring plan and the same is in line with the monitoring methodology /2.3/. The applicable parameters stated in the revised monitoring plan/1.9/ and the applied methodology/2.3/ have been sufficiently monitored. The responsibilities and authorities for monitoring and reporting are in accordance with what is stated in the approved PDD monitoring plan/1.2/ and revised PDD under PRC/1.6/. The information flow (data generation, aggregation, recording, calculation and reporting) for the parameters to be monitored including its values in the final version of the MR/1.5/ have been correctly reported and confirmed. Hence, the requirement of CDM-VVS for v02.0 §§ 360-364 have been met.

E.6.3. Implementation of sampling plan

Means of verification	No sampling plan is defined in the approved monitoring plan. All the data and information has been checked during verification assessment, thus no sampling plan has been applied in the Project.
Findings	Not Applicable
Conclusion	Not Applicable

E.7. Compliance with the calibration frequency requirements for measuring instruments

Means of verification	All the monitoring parameters have been monitored and the monitoring results are consistently recorded as per the frequency mentioned under the approved revised monitoring plan. Accuracy of all equipment has been observed to be maintained within the specified limits. The metering equipment for electricity measurement mainly consists of a main meter and a check energy meter (tri-vector type) which are used to monitor the quantity of net electricity export and import by the project activity. All the meters are 0.2s accuracy class. The calibration was done by qualified and authorised personnel from RSVVPNL. The assessment team has checked the calibration certificates/5.1/for accuracy and validity, so as to assure reliability and steadiness of monitoring results. The calibrations results have been verified as below.

Monitoring equipment	Energy Meter	
Monitoring parameter	$EG_{BL,y}$, $\mathbf{EG_{import}}$	
Unique Identification Number/Sr. No.	RJB 89896 (Main Meter)	RJB 89897 (Check Meter)
Accuracy Level	0.2	0.2

Calibration frequency requirement	Annual	Annual
Date of Calibration	01/07/2019 22/06/2020	01/07/2019 22/06/2020
Validity of calibration	01/07/2020 22/06/2021	01/07/2020 22/06/2021
Delays in calibration (if any)	None	None
Calibration Conducting Entity	State utility	State utility

The metering equipment for measurement of quantity of gross electricity supplied to the grid and Quantity of electricity used for auxiliary consumption in year y are calibrated on annual basis by the state entity (RRVPNL).The assessment team has checked the calibration certificates/5.2/for accuracy and validity, so as to assure reliability and steadiness of monitoring results. The calibrations results have been verified as below.

Monitoring equipment	Energy Meter	Energy Meter
Monitoring parameter	EG_{gross}	EG_{Aux}
Unique Identification Number/Sr. No.	4223178	10-05-UNI-6756
Accuracy Level	0.5	1.0
Calibration frequency requirement	Annual	Annual
Date of Calibration	01/07/2019 22/06/2020	01/07/2019 22/06/2020
Validity of calibration	01/07/2020 22/06/2021	01/07/2020 22/06/2021
Delays in calibration (if any)	None	None
Calibration Conducting Entity	State utility	State utility

During the current monitoring period it is verified that the calibration of energy meters is carried out as per the frequency mentioned in the PDD/1.9/.It is verified that the data recorded through the main meter only is used for calculation of emission reductions during the current monitoring period.

The metering equipment for biomass measurement mainly consists of on line weighing system (Belt conveyer); used to monitor the quantity of biomass procured on each delivery in the project activity. The Calibration is done by a third party. The assessment team has verified by reviewing the calibration certificate /5.3/; results have been verified as below.

Monitoring equipment	Belt weigher
Monitoring parameter	$M_{biomass,y}$
Unique Identification Number/Sr. No.	1798
Accuracy Level	0.1 Ton
Calibration frequency requirement	Annual
Date of Calibration	03/08/2019 20/07/2020
Validity of calibration (Next Calibration due date)	03/08/2020 20/07/2021
Delays in calibration (if any)	None

Calibration Conducting Entity	C & I Calibrations Pvt. Ltd.

The calibration interval is annual and there is no delay in calibration of Weigh Bridge during the current monitoring period from 01/03/2020 to 31/12/2020.

The results of the calibration are satisfactory and are accepted. There was no change in the installed meters observed, since commissioning of the plant. To enhance the accuracy of the biomass input based electricity calculation, the load cell data is used in line with the PDD/1.9/. The accuracy of the load cell data was ensured using the results of the calibration test certificate /5.3/ for the load cell and found to be satisfactory.

Further, equipment like digital electronic balance and hot air oven are used to measure the moisture content of the biomass and Bomb calorimeter is used as equipment for NCV calculation of biomass consumed. These equipments are calibrated annually by a third party. The assessment team has verified by reviewing the calibration certificate /5.3/. The details of instrument is provide as below:

Monitoring equipment	Digital Electronic Balance	Hot Air Oven	Bomb calorimeter
Monitoring parameter	$W_{biomass}$		$NCV_{k,y}$
Unique Identification Number/Sr. No.	50460757	CPL/HAO-01	3284
Accuracy Level	0.1 mg	0.1C	0.1
Calibration frequency requirement	Annual	Annual	Annual
Date of Calibration	03/08/2019 03/08/2020	02/08/2019 02/08/2020	02/08/2019 20/07/2020
Validity of calibration	03/08/2020 03/08/2021	02/08/2020 02/08/2021	02/08/2020 20/07/2021
Delays in calibration (if any)	None	None	None
Calibration Conducting Entity	C & I Calibrations Pvt. Ltd.	C & I Calibrations Pvt. Ltd.	C & I Calibrations Pvt. Ltd.

There is no consumption of fossil fuel in the project during the monitoring period, And the NCV value for fossil fuel is taken by default from an authorised source. Hence, no calibration is required.

Findings	CL#6 was raised and resolved.
Conclusion	Applus+ Certification confirms that the calibration is conducted at the frequency following the relevant industry standard as specified by the methodology /2.3/ and the PDD monitoring plan /1.9/. Therefore, the requirement of CDM-VVS for PA v02.0 §§ 367 have been met.

E.8. Assessment of data and calculation of emission reductions or net removals

E.8.1. Calculation of baseline GHG emissions or baseline net GHG removals by sinks

Means of verification	The verification team verified that a) A complete set of data for the monitoring period was available for the monitoring period and the verification of each monitoring parameter is elaborated under Section E.6.2 of this report. The complete monitoring data is also presented in the corresponding final ER sheet /4.3/ of final Monitoring Report /1.5/. b) The information provided in the monitoring report was cross checked with other sources, wherever appropriate and available, and such information is also included under Section E.6.2 of this report.

	c) The calculations of baseline emissions as presented in the corresponding ER sheet/4.4/ of final Monitoring Report/1.5/ were checked and found to be consistent with the formulae and methods described in the monitoring plan and the applied methodology. d) All assumptions used in the emission calculations were found appropriate and therefore justified e) Appropriate emission factors and other reference values have been correctly applied. This has also been elaborated under Section E.6.1 of this report. f) No standardized baseline was prescribed in the PDD/1.9/ and therefore it has not been applied. g) There is no pro-rate approach was applied in the current monitoring period as entire monitoring period falls into period that is after the end of first commitment period of Kyoto Protocol. The baseline emissions are the product of net electricity supplied to the grid EG_y expressed in MWh of electricity produced by the renewable generating unit multiplied by the grid emission factor. Baseline emission factor is calculated as combined margin, consisting of a combination of operating margin (OM) and build margin (BM) factors. $BE_y = EG_{BLy} * EF_{CO2,grid,y}$ Where: BE_y : Baseline Emissions in year y; t CO_2 EG_{Bly} : Quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in year y (MWh) $EF_{CO2,grid,y}$ = CO_2 emission factor of the grid in year y (tCO_2e/MWh) $EG_{BL,y} = EG_{export} - EG_{Import}$ .....Eq1 Where, EG_{export} Electricity exported due to the project activity in the year y, MWh EG_{import} Electricity imported due to the project activity in the year y, MWh $EG_{export} = EG_{gross} - EG_{aux}$ .....Eq2 Where, EG_{gross} Gross electricity generated by the project activity in the year y, MWh EG_{aux} Auxiliary consumption due to the project activity in the year y, MWh As per the PDD/1.9/, combined margin emission factor is 0.88525 tCO_2 /MWh. Hence the baseline emissions for the project activity for the current monitoring period are as follows. BEy = $EG_{BL,y}$ * 0.88525 tCO_2e/MWh = (36,586.55 * 0.88525) tCO_2e = 32,388 tCO_2e (rounded down value has been considered) The verification team has reviewed that for the purpose of conservative estimation of ER, PP has considered the $EG_{BL,y}$ value from the JMR, where export & import readings are presented. This value ($EG_{BL,y}$) is found to be conservative than the value calculated using the other two parameters as per the equation 2 and further applied into the equation 1 (which is $EG_{Gross} – EG_{Auxiliary} – EG_{Import}$). The verification team could confirm that the export value in the JMR is already excluded by auxiliary consumption as the export meter is located after the metering point of gross generation meter and auxiliary consumption meter. This has been verified from the meter location diagram shown under the Section C of the MR which is consistent with the registered PDD. Hence, overall calculation approach is found to be appropriate in line with the methodology and as per monitoring plan of the registered PDD. The value of the ER estimated is found to be conservative and hence accepted.
Findings	CAR#2 and CAR#3 were raised and resolved
Conclusion	Applus+ Certification confirms that the requirement outlined under CDM-VVS for v02.0 §§ 373 have been meet as:

	• A complete set of data for the monitoring period is available. • Information on the baseline GHG emission calculation provided in the monitoring report /1.5/ has been cross-checked with other sources. • Calculations of baseline emissions have been carried out in accordance with the formulae and methods described in the monitoring plan and the applied methodology document. • Appropriate emission factor of the power grid has been correctly applied.

E.8.2. Calculation of project GHG emissions or actual net anthropogenic GHG removals by sinks

Means of verification	The PP has calculated the Project Emissions due to Auxiliary Fuel (e.g. Diesel etc) consumption is estimated as per the following equation: $PE_{FC,j,y} = \sum_i FC_{i,j,y} * COEF_{i,y}$ Where: $PE_{FC,j,y}$ are the CO2 emissions from fossil fuel combustion in process j during the year y(tCO2/yr); $FC_{i,j,y}$ is the quantity of fuel type i combusted in process j during the year y (mass or volume unit/yr); $COEF_{i,y}$ is the CO2 emission coefficient of fuel type i in year y (tCO2/mass or volume unit) i are the fuel types combusted in process j during the year y The CO2 emission coefficient $COEF_{i,y}$ is calculated based on net calorific value and CO2 emission factor of the fuel type i, $COEF_{i,y} = NCV_{i,y} \cdot EF_{CO2,i,y}$ Where: $NCV_{i,y}$ Is the weighted average net calorific value of the fuel type i in year y (GJ/mass or volume unit) $EF_{CO2,i,y}$ Is the weighted average CO2 emission factor of fuel type i in year y (tCO2/GJ) i are the fuel types combusted in process j during the year y PE_y = 0 tCO_2e, no fossil fuel was consumed during the current monitoring period The details reported in the ER calculation sheet /4.4/is checked and found to be correct.
Findings	CL#4 was raised and resolved
Conclusion	Applus+ Certification confirms that the requirement outlined under CDM-VVS for v02.0 §§ 373 have been meet as: • A complete set of data for the monitoring period is available. • Information on the project GHG emission calculation provided in the monitoring report /1.5/ has been cross-checked with other sources. • Calculations of project emissions have been carried out in accordance with the formulae and methods described in the monitoring plan and the applied methodology document. • Appropriate emission factor of the Diesel has been correctly applied.

E.8.3. Calculation of leakage GHG emissions

Means of verification	Based on review of the biomass assessment study carried out for the project activity revealed that: • Biomass is transported over a distance of less than 200 kilometers, and its availability is within the permissible transportable distance i.e. under 50 km

	radius. • The quantity of biomass available in the region is more than 25% of the biomass utilized in the project activity. Hence, leakage has been neglected. Therefore, Leakage, LEy =0.
Findings	No non-conformability was observed during assessment for this section. Therefore, no finding was raised.
Conclusion	Applus+ Certification confirms that the requirement outlined under CDM-VVS for v02.0 §§ 373 have been meet as: • A complete set of data for the monitoring period is available. • Information on the project GHG emission calculation provided in the monitoring report /1.5/ has been cross-checked with other sources. • Calculations of project emissions have been carried out in accordance with the formulae and methods described in the monitoring plan and the applied methodology document.

E.8.4. Summary calculation of GHG emission reductions or net anthropogenic GHG removals by sinks

Means of verification	The verification team has reviewed the calculation of GHG emission reductions in the final MR /1.5/ and ER spreadsheet /4.3/ as per the PDD /1.9/ and the applied methodology /2.3/. As per the applicable methodology AMS I.D. Version 18: The emission reduction is calculated as $ER_y = BE_y – PE_y – LE_y$ ER_y = 32,388 tCO_2e The assessment team verified that the final ER excel spreadsheet /4.3/, the monitoring parameters are reported for each month and aggregated for the entire monitoring period. The total of the monthly net export values ($EG_{BL,y}$, as derived conservatively) has been considered for ER calculation for the current monitoring period. Therefore, the PP has done the assessment conservatively and the final ER value verified by DOE is 32,388 tCO_2e.
Findings	No non-conformability was observed during assessment for this section. Therefore, no finding was raised.
Conclusion	Applus+ Certification confirms that the requirement outlined under CDM-VVS for PA v02.0§§ 373 have been meet as: • A complete set of data for the monitoring period is available. • Information provided in the monitoring report /1.5/ has been cross-checked with other sources; • Calculations of baseline emissions, and project activity emissions and leakage, as appropriate, been carried out in accordance with the formulae and methods described in the monitoring plan and the applied methodology document. • There are no assumptions in emission reductions calculation. • Appropriate emission factor of the power grid has been correctly applied.

E.8.5. Comparison of actual GHG emission reductions or net anthropogenic GHG removals by sinks with estimates in PDD

Means of verification	The comparison of actual GHG emission reductions with estimates in PDD /1.9/ has been checked and re-calculated by the verification team. The emission reduction during the monitoring period (01/03/2020 - 31/12/2020, 306 days) is verified as 32,388 tCO_2e. According to the approved revised PDD, the annual emission reductions were estimated as 37,300 tCO2e, compared with the value of estimated emission reductions during the same period in the PDD /1.9, i.e. 44,493 tCO_2e (44,493 tCO_{2e} × 306 days/365days = 37,300 tCO_2e), the verified

	emission reductions are 13.17% lesser than the estimated value in the monitoring period.
Findings	No non-conformability was observed during assessment for this section. Therefore, no finding was raised.
Conclusion	Applus+ Certification confirms that the requirement outlined under CDM-PS for PA v02.0 §§ 268 have been meet as: • A comparison of actual GHG emission reductions or net anthropogenic GHG removal of the project activity achieved during this monitoring period with the estimates in the approved PDD /1.9/ has been provided in the Monitoring Report /1.5/. • The verification team confirms that the calculation of the comparison is correct.

E.8.6. Remarks on difference from estimated value in PDD

Means of verification	The verification team has assessed the cause of any variation in the actual GHG emission reductions achieved during the current monitoring period by reviewing the previous verification reports /1.5/ and the current monitoring report. There is decrease of 13.17% in the actual emission reductions achieved during the current monitoring period from that stated in the CDM-PDD. The variation is mainly due to less electricity supplied to DISCOMs due to shut down periods of the plant and correspondingly decrease in electricity generation compared to expected or estimate in PDD /1.9/. The breakdown and outage of the plant was verified by assessment team and found to be appropriate, hence accepted.
Findings	No non-conformability was observed during assessment for this section. Therefore, no finding was raised.
Conclusion	Applus+ Certification confirms that the requirement outlined under CDM-PS for PA v02.0 §§ 269 and CDM-VVS for PA v02.0 §§ 356 (d) have been meet as: • The verified emission reductions are higher than the estimated value in the monitoring period. The project participants have explained the cause of any increase in the actual GHG emission reductions achieved during the current monitoring period and including all information (i.e. data and/or parameters) that is different from that stated in the approved PDD /1.9/. • The variation is deemed to be reasonable.

E.8.7. Actual GHG emission reductions or net anthropogenic GHG removals by sinks during the first commitment period and the period from 1 January 2013 onwards

Means of verification	The verification team has reviewed the monitoring report with the daily/monthly reading records to assess whether the GHG emission reductions or removals has been correctly calculated based on a pro-rata approach. The assessment team is able to certify that the emission reductions from the CDM project activity 0347 "Chambal Power Limited's (CPL) proposed 7.5 MW biomass based power project at Rangpur, Kota District, Rajasthan, India" in India during the period 01/03/2020 - 31/12/2020 (first and last day included) amount to 32,388 tCO_2e. Verified and Certified GHG emission reductions or net GHG removals by sinks reported: Up to 31/12/2012 — Not Applicable From 01/01/2013 until 31/12/2020 — 32,388 tCO_2e From 01/01/2021 onwards — Not Applicable (Note: current Monitoring period i.e. 01/03/2020 to 31/12/2020 does not fall under first commitment period, therefore GHG emission reductions up to 31/12/2012 is Not Applicable and also current Monitoring Period not beyond the 31/12/2020, there GHG emission reductions onwards 31/12/2020 is Not Applicable)
Findings	No non-conformability was observed during assessment for this section. Therefore, no finding was raised.

Conclusion	Applus+ Certification confirms that the requirement outlined under CDM-PS for PA v02.0 §§ 266 as the project participants has calculated GHG emission reductions.

E.9. Assessment of reported sustainable development co-benefits

Means of verification	Not applicable
Findings	Not applicable
Conclusion	Not applicable

E.10. Global stakeholder consultation

Means of verification	Not applicable
Findings	Not applicable
Conclusion	Not applicable

SECTION F. Internal quality control

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As a final step of verification, the final documentation including the verification report has to undergo an internal quality control by the Technical Reviewer. Each report has to be finally approved either by the DOE's Technical Manager or the Deputy. In case one of these two persons is part of the assessment team, the approval can only be given by the person who is not a part of the assessment team. If the documents have been satisfactorily approved, the Request for Issuance is submitted to the CDM-EB along with the relevant documents.

Thus, a draft verification report prepared by verification team is reviewed by an independent technical review team (one or more members) to confirm whether all the internal procedures established and implemented by Applus+ Certification were duly complied with and such opinion/conclusion were reached in an objective manner that complies with the applicable CDM rules/requirements. The technical review team is collectively required to possess the technical expertise of all the technical area/sectoral scope the project activity relates to. All team members of technical review team are independent of the verification team.

During the technical review process, additional findings may be identified or the closed-out findings may be opened, which needs to be satisfactorily resolved before the request for issuance is submitted to UNFCCC. The independent technical reviewer may either approve the report as such or reject/return the same in such case providing the comments/findings/issues that needs to be resolved by the verification team. The decision taken by the Technical Reviewer is final and is authorized by the authorized approver of Applus+ Certification.

SECTION G. Verification opinion

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Applus+ Certification has been contracted by Suryaa Chamball Power Limited to perform the verification of the emission reductions reported for the CDM project "Chambal Power Limited's (CPL) proposed 7.5 MW biomass based power project at Rangpur, Kota District, Rajasthan, India" in the period 01/03/2020 – 31/12/2020.

Applus+ Certification concludes that the CDM Project "Chambal Power Limited's (CPL) proposed 7.5 MW biomass based power project at Rangpur, Kota District, Rajasthan, India", as described in the PDD /1.2/ (Version 05.2, 27/02/2013), revised approved PDD (Version 9, 04/01/2020), and Monitoring Report /1.5/ (final Version 3, 11/09/2021), meets all relevant requirements of the UNFCCC for CDM project activities including article 12 of the Kyoto Protocol, the modalities and procedures for CDM (Marrakesh Accords) and the subsequent decisions by the COP/MOP and CDM Executive Board. The verification is conducted in line with the VVS /2.1/ requirements. The project is implemented according to selected monitoring methodology /2.3/ and the monitoring plan contained in the approved revised PDD /1.9/. The monitoring equipment were installed, calibrated and maintained in a proper manner. The monitoring system is in place and the project is generating GHG emission reductions as a CDM project.

Applus+ Certification confirms that the project is implemented in accordance with the validated and approved Project Design Document/1.9/. The monitoring system is in place and the emission reductions are calculated

without material misstatements. Our opinion relates to the projects GHG emissions and the resulting GHG emission reductions reported and related to the valid and project baseline and monitoring and its associated documents. Based on the information seen and evaluated we confirm that the implementation of the project has resulted in 32,388 tCO_2e emission reductions during the period 01/03/2020 – 31/12/2020 (both days included). Applus+ Certification therefore issues the positive verification opinion expressed in the Certification statement in Section H.

SECTION H. Certification statement

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Applus+ Certification has been engaged by Suryaa Chamball Power Limited to perform the first periodical verification of third crediting period of the 'Chambal Power Limited's (CPL) proposed 7.5 MW biomass based power project at Rangpur, Kota District, Rajasthan, India' (UNFCCC Ref. No. 0347).

The management of Suryaa Chamball Power Limited is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions on the basis set out within the project's Monitoring Plan in the PDD Version 5. /1.2/, completed on 27/02/2013, revised PDD, version 09/1.9/ and the applied methodology AMS-I.D. Version: 18/2.3/.

Our verification approach was based on the requirements as defined under the Kyoto Protocol, Marrakesh accord, as well as those defined by the CDM Executive Board. Our approach is risk-based, drawing on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these. The verification can confirm that:

- the project is operated as planned and described in the project design document approved by the EB;
- the approved monitoring plan is as per the applied methodology;
- the monitoring in Monitoring Report is as per the PDD and the monitoring plan approved by the EB;
- the development and maintenance of records and reporting procedures are in accordance with the monitoring plan;
- the installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately;
- the monitoring system is in place and generates GHG emission reductions data;
- the GHG emission reductions are calculated without material misstatements.

In our opinion, the GHG emission reductions for the project 'Chambal Power Limited's (CPL) proposed 7.5 MW biomass based power project at Rangpur, Kota District, Rajasthan, India' for the monitoring period 01/03/2020 to 31/12/2020 as reported in Monitoring Report, prepared on the basis of the project's Monitoring Plan are fairly stated.

Based on the information we have seen and evaluated, we confirm the following statement:

Reporting period:	From 01/03/2020 to 31/12/2020
Verified emissions in the above reporting period:	
Leakage emissions	00,000 tCO_2 equivalents
Project emissions	00,000 tCO_2 equivalents
Baseline emissions	32,388 tCO_2 equivalents
Emission reductions in this monitoring period (i.e. 01/03/2020 – 31/12/2020)	32,388 tCO_2 equivalents
Emission reductions achieved during the period up to 31 December 2012	Nil
Emission reductions achieved during the period from 1 January 2013 onwards. (i.e. 01/03/2020 – 31/12/2020)	**32,388 tCO_2 equivalents**

Appendix 1. Abbreviations

Abbreviations	Full texts
SCPL	Suryaa Chamball Power Limited
AMS	Approved Methodology Small-scale
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEA	Central Electricity Authority
CER	Certified Emission Reductions
CICPL	C & I systems Private Limited
CL	Clarification Request
CPL	Chambal Power Limited's
CM	Combined Margin
CO_2e	Carbon Dioxide equivalent
CoP/MoP/CMP	Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	CDM Executive Board
EF	Emission Factor
ER	Emission Reductions
GCV	Gross Calorific Value
GHG	Greenhouse Gas(es)
GPS	Global Positioning System
IPCC	Intergovernmental Panel on Climate Change
ISO	International Organisation for Standardisation
KWh	Kilowatt hour
MP	Monitoring Plan
MR	Monitoring Report
MW/MWh	Megawatt/ Megawatt hour
NEWNE	North East West and North-East
NCV	Net Calorific Value
OM	Operating Margin
PDD	Project Design Document
PP	Project Participant
PPA	Power Purchase Agreement
PLF	Plant Load Factor
PS	Project Standard
QMS	Quality Management System
RRVPNL	Rajasthan Rajya Vidyut Prasaran Nigam Limited
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard

Appendix 2. Competence of team members and technical reviewers

According to the sectoral scope / technical area and experience in the sectoral or national business environment, Applus+ Certification has composed a project assessment team in accordance with the appointment rules in the internal Quality Management System of Applus+ Certification.
The composition of audit team shall be approved by the Applus+ Certification ensuring that the required skills are covered by the team.
The four qualification levels for team members that are assigned by formal appointment rules are as presented below:

- Lead Auditor (LA).
- Auditor (A) / Auditor in Training (AiT).
- Technical Expert (TE).
- Technical Reviewer (TR).

The sectoral scope / technical area knowledge linked to the applied methodology/ies shall be covered by the assessment team.

Name	Qualification	Coverage of scope	Coverage of technical Area	Financial aspect	Host country Experience	Attendance to the Assessment (remote)
Ravi Kant Soni	Lead Auditor (LA)	Yes (1)	Yes (1.1)	N/A	Yes	Yes
Ravi Kant Soni	Technical Expert (TE)	Yes (1)	Yes (1.1)	N/A	Yes	Yes
Simon Shen	Technical Reviewer (TR)	Yes (1)	Yes (1.1)	N/A	N/A	N/A

The curricula vitae of the DOE's team members are provided below:

Ravi Kant Soni is a certified lead auditor for Lead Auditor ISO 14001:2004&Lead Auditor ISO 14064:2006 GHG Inventory and verification. He has more than 10 years of work experience across Climate Change, Environmental Management & Monitoring, Health & Safety Management, and Statutory Compliance. He was involved in more than 100 CDM validation and verifications activities and Gold Standard, VER projects as a team leader/technical reviewer / validator / verifier covering the sectoral scope 1 technical area 1.2. ,3.1He has done Mater in Technology (Energy Management) from a premier institute, School of Energy & Environmental Studies, DAVV, Indore (M.P.), India and Bachelor of Engineering (Mechanical Engineering) from M.I.T.S Gwalior Jiwaji University Gwalior, India.

Simon Shen (Master's Degree in Thermal Energy Engineering, Bachelor's Degree in Environmental Engineering) is an Auditor appointed by Applus+ Certification for the GHG project assessment, auditing and technical review.
He has more than 6 years of work experience in CDM/GS4GG/VCS project assessment and review with Applus+, apart from the years of experience working as GHG Auditor and ISO 9001/14001 in TUV SUD before he joined Applus+ for 3.5 years.

Mr. Simon Shen has extensive experience also as former Applus+ Shanghai CDM Technical Manager.

Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1.	**Basic Documents (Monitoring Report, Project Design Documents, Previous Verification Reports)**			
1.1	SCPL	MR version 1.0 "Chambal Power Limited's (CPL) proposed 7.5 MW biomass based power project at Rangpur, Kota District, Rajasthan, India"	10/06/2021	PP
1.2	SCPL	PDD, version 5.2	27/02/2013	PP
1.3	SGS	Validation Report for approved PDD	27/02/2013	Other: DOE
1.4	UNFCCC website	CDM Project activity view page "Chambal Power Limited's (CPL) proposed 7.5 MW biomass based power project at Rangpur, Kota District, Rajasthan, India" http://cdm.unfccc.int/Projects/DB/SGS-UKL1143542684.71/view	01/10/2013	Other: UNFCCC
1.5	SCPL	MR, version 3.0 (Final) "Chambal Power Limited's (CPL) proposed 7.5 MW biomass based power project at Rangpur, Kota District, Rajasthan, India"	11/09/2021	PP
1.6	SCPL	PRC PDD, version 7.0 "Chambal Power Limited's (CPL) proposed 7.5 MW biomass based power project at Rangpur, Kota District, Rajasthan, India"	10/08/2019	PP
1.7	LGAI Technological Center, S.A. (Applus)	1st Verification report for monitoring period 01/03/2013 to 30/06/2015 (Version 1.1, dated 27/11/2015)	27/11/2015	Other: DOE
1.8	LGAI Technological Center, S.A. (Applus)	Last Verification report for the monitoring period 01/01/2019 to 29/02/2020 (version 4.1, dated 06/02/2021)	13/03/2021	Other: DOE
1.9	SCPL	Approved revised PDD version 09	04/01/2020	PP
1.10	SCPL	MR, version 2.0 "Chambal Power Limited's (CPL) proposed 7.5 MW biomass based power project at Rangpur, Kota District, Rajasthan, India"	20/07/2021	PP
2.	**References and requirements at UNFCCC/IPCC/etc.**			
2.1	UNFCCC website	Clean Development Mechanism Validation and Verification Standard for Project Activity (CDM-VVS for PA), version 02.0 as per EB 93, Annex 5	Dated 29/11/2018	Other: UNFCCC
2.2	UNFCCC website	CDM Project Standard for Project Activity (CDM-PS for PA), version 02.0 as per EB 93, Annex 4	Dated 29/11/2018	Other: UNFCCC
2.3	UNFCCC website	AMS-I.D. (version 18.0.0): "Grid connected renewable electricity generation"	Dated 28/11/2014	Other: UNFCCC
2.4	UNFCCC website	Guidance to Complete "Monitoring Report Form (CDM-MR-FORM), Version 08.0" as accordance with the Attachment "Instructions for filling out the monitoring report form"	Dated 06/04/2021	Other: UNFCCC
2.5	UNFCCC website	Tool to calculate project or leakage CO2 emissions from fossil fuel combustion(Version 02)	02/08/2008	Other: UNFCCC
2.6	IPCC	IPCC Guidelines Vol. 2	Year 2006	Other: IPCC
2.7	CDM EB	The Executive Board of the Clean Development Mechanism	Date: 17–19	Other:

		(CDM) agreed at its 110th meeting, the Board agreed (in responses to Stakeholder Communication INQ-10737) to extend the COVID-19 Temporary Measures until 31/12/2021.	May and 25–27 May 2021	UNFCCC
3.	**Project implementation information**			
3.1	RRVPNL	Commissioning Certificate for the project activity by RRVPNL for synchronisation with the grid on 31/03/2006	06/05/2006	Other: RRVPNL
3.2	SCPL	Power Purchase Agreements (PPA) for the project activity between CPL and RRVPNL	28/03/2003	PP
3.3	RRVPNL	Monthly Joint Meter Reports (JMRs) issued by RRVPNL	From 01/03/2020 to 31/12/2020	Other: RRVPNL
3.4	SCPL	Daily generation data	From 01/03/2020 to 31/12/2020	PP
3.5	SCPL	Log book	From 01/03/2020 to 31/12/2020	PP
3.6	SCPL	Record book	From 01/03/2020 to 31/12/2020	PP
3.7	SCPL	Power Supply bills towards RRVPNL. raised	From 01/03/2020 to 31/12/2020	PP
3.8	SCPL	Monthly Shutdown reports as submitted to SCPL management during the monitoring period	From 01/03/2020 to 31/12/2020	PP
3.9	SCPL	Diesel consumption data maintained on monthly basis	From 01/03/2020 to 31/12/2020	PP
3.10	SCPL	Biomass Feed report for the entire monitoring period	From 01/03/2020 to 31/12/2020	PP
3.11	SCPL	Fuel procurement bills of biomass from fuel supplier	From 01/03/2020 to 31/12/2020	PP
3.12	SCPL	Biomass monitored data using the load cells	From 01/03/2020 to 31/12/2020	PP
3.13	SCPL	Internal Lab test reports for checking of GCV, moisture and ash content for biomass AAEL	From 01/03/2020 to 31/12/2020	PP
3.14	SCPL	Receipt from supplier on purchase of biomass.	From 01/03/2020 to 31/12/2020	PP
4.	**ER calculation and cross checking issue**			
4.1	SCPL	Emission reduction calculation sheet version 1.0	10/06/2021	PP
4.2	SCPL	Emission reduction calculation sheet version 2.0	20/07/2021	PP
4.3	SCPL	Emission reduction calculation sheet version 3.0	11/09/2021	PP
5.	**Calibration issues**			

5.1	RRVPNL	Energy meter testing report for Main and check energy meters	Across the monitoring period	Other: RRVPNL
5.2	RRVPNL	Energy meter testing report of energy meters for gross electricity generation and auxiliary consumption	Across the monitoring period	Other: RRVPNL
5.3	CICPL	Calibration test certificates for belt weigher, digital electronic balance, hot air oven and bomb calorimeter by C & I systems	Across the monitoring period	Other: CICPL
6.	**Others**			
6.1	Applus+ Certification	Remote Assessment and Interviews	26/07/2021	-
6.2	SCPL	Plant Photographs and videos	-	-
6.3	CEA	CEA database version 14.0 available at https://cea.nic.in/wp-content/uploads/baseline/2020/07/user_guide_ver14.pdf	-	Other: CEA
6.4	SCPL	Rajasthan Electricity Regulatory Commission, Petition No.RERC-556/15	04/07/2016	PP
6.5	SCPL	Jaipur Vidyut Vitran Nigam Limited, Meter shifting letter	02/09/2016	
6.6	SCPL	ERPA signed with WeAct Pty Ltd., Australia dated 03/11/2020.	03/11/2020	PP

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

Table 1. Remaining FAR from validation and/or previous verifications

FAR ID	xx	**Section no.**	E.2	**Date:** DD/MM/YYYY
Description of FAR				
Project participant response				**Date:** DD/MM/YYYY
Documentation provided by project participant				
DOE assessment				**Date:** DD/MM/YYYY

Table 2. CL from this verification

CL ID	01	**Section no.**	Title, Section A, Section C	**Date :12/07/2021**
Description of CL				
PP is requested to provide: 1. Invoice issued by RSEB for the current monitoring period to DOE for verification of ERs 2. Document for verifying the commercial operation start date and commissioning date of the Project activity are same. 3. Document for verifying that WeAct Pty ltd is a Project participant to the assessment team 4. Document for Shutdown hours of the Project activity to assessment team.				
Project participant response				**Date : 22/07/2021**
1. All invoices are submitted along with the JMRs 2. Commissioning certificate has been submitted which can be cross checked from the dates included in the PDD during all three crediting period and also in all the monitoring reports. 3. PP would like to refer to the approved MOC copy available at the UNFCCC web-interface. Also, UNFCCC has approved as Project Participant, which can be directly checked from Project web interface. 4. PP has submitted documentary evidence for the shutdown hours.				
Documentation provided by project participant				
All required documents are submitted to DOE.				
DOE assessment				**Date:05/08/2021**
PP has provided all the required documents including JMRs, Commissioning certificates, MOC and shutdown hours to DOE and they are found to be consistent with the information provided in the updated Monitoring report Version 2.0 dated 20/07/2021. Hence accepted. CL #1 closed				

CL ID	02	**Section no.**	C	**Date :12/07/2021**
Description of CL				
PP is requested to explain the inconsistency found in shutdown hours between the “Reasons for Shutdown” pdf and “ DAILY_SHIFTWASE_DATA” Excel sheet provided by PP.				
Project participant response				**Date : 22/07/2021**

PP would like to reconfirm that there is no inconsistency in shutdown hours.

PP would like to clarify that the records of shutdown hours to be referred from the day wise data in the Monthly Statements submitted to DOE. These sheets includes all non-operational or total shutdown hours in each month, whereas in the 'Daily Shiftwise data sheets' only the batches with total shutdown or non-operation hours are recorded, which means any partial shutdown hours within any batch is not separately reported in the Daily Shiftwise data sheet. For example, if during a batch say "6:00 to 14:00", if 2 hours were non-operational, that will not be identified in the batch data, as other hours of the batch was operational. In case the plant was non-operational during the entire batch, then only value will be shown as Zero, which signifies that the plant was shut down during the entire batch. But in the daily logs of the monthly statement sheets, each and every shutdown hours and minutes are recorded and these are the main source documents for the shutdown hours.

Therefore, as a separate reference, these shutdown hours were extracted from the daily logs and separately submitted to DOE and same information has been reported in the MR consistently. Hence, these shutdown hours are consistent with both the source documents submitted to DOE.

Documentation provided by project participant

"Daily Shiftwise data sheet-with crosschecks"

DOE assessment	**Date:05/08/2021**

PP has provided the proper clarification to the assessment team and shutdown hours detail is found to be consistent in the Monitoring report Version 2.0 dated 20/07/2021. Hence accepted.

CL #2 closed

CL ID	03	**Section no.**	D	**Date :12/07/2021**

Description of CL

PP is requested to clarify the purpose of the footnote mentioned in "$\mathbf{EG_{BM,y}}$ " table to assessment team.

Project participant response	**Date : 22/07/2021**

The footnote reference was incorrect in the first version of the MR.
The footnote reference has been now updated correctly in the revised version of the MR.

Documentation provided by project participant

MR, version 02, dated 20/07/2021

DOE assessment	**Date:05/08/2021**

Assessment team confirms that PP has updated the information in the revised Monitoring report Version 2.0 dated 20/07/2021. Hence accepted.

CL #3 closed

CL ID	04	**Section no.**	D.2	**Date :12/07/2021**

Description of CL

PP is requested to provide:

1. The calibration certificates of all the equipments for the period of 02/08/2020-02/08/2021 & 03/08/2020-03/08/2021.
2. The logbook records of Quantity of gross electricity supplied to the grid in year y to assessment team for verification of the value
3. The logbook records of Quantity of electricity used for auxiliary consumption in year y to assessment team for verification of the value
4. Documents for biomass consumed for all the months covered under current monitoring period for verification of the values.
5. The laboratory log book records of moisture content in biomass to assessment team for verifying the value
6. The Laboratory record of net calorific value to assessment team for verification of the value.
7. The logbook records of on-site diesel consumption to assessment team for verification even if the consumption is zero.

Project participant response	**Date : 22/07/2021**

PP hereby confirms submission of the following documents to DOE:

1. Calibration Certificates of all the monitoring equipment have been submitted to DOE
2. Logbook records are submitted for Gross electricity values during the current MP
3. Logbook records are submitted for auxiliary electricity consumptions during the current MP
4. Monthly biomass consumption records across the entire current MP
5. Laboratory records for biomass moisture content for the entire MP
6. Laboratory records for biomass net calorific values for the entire MP
7. Since there is no on-site diesel consumption at the plant, hence fossil fuel records are nil. As a reference log book copy is submitted, which has nil records.

Documentation provided by project participant

All required documents are submitted to DOE.

DOE assessment	**Date: 05/08/2021**

PP has provided all the required documents including Calibration Certificates, Logbook records, Monthly biomass consumption records and Laboratory records to DOE and they are found to be consistent with the information provided in the updated Monitoring report Version 2.0 dated 20/07/2021. Hence accepted.

CL #4 closed

CL ID	05	**Section no.**	D.2	**Date :12/07/2021**

Description of CL

PP is requested to clarify the monitoring frequency of NCV biomass as it does not align with the renewed PDD version 09 and AMS I.D version 18

Project participant response	**Date : 22/07/2021**

The reporting frequency of NCV has been corrected in line with the PDD (renewal PDD, version 09). Since the reporting frequency is monthly, and the source of data is “Laboratory record (archived on paper)”, hence the monthly avg. value is reported in the ER sheet for each month and avg. of all monthly values has been reported under the MR.

Documentation provided by project participant

Revised MR, version 02, dated 20/07/2021

DOE assessment	**Date:05/08/2021**

Assessment team confirms that PP has updated the reporting frequency of NCV in the revised Monitoring report Version 2.0 dated 20/07/2021. Hence accepted.

CL #5 closed

CL ID	06	Section no.	D.2	Date :12/07/2021
Description of CL				
PP is requested to clarify the type of energy meter used in the current monitoring period, during assessment it was found that type mentioned did not match with the calibration certificates provided by PP				
Project participant response				**Date : 22/07/2021**
PP hereby clarifies that all energy meters reported under MR are in line with the PDD (renewal PDD, version 09). However, in some places there were some typo errors which have been now corrected. All meter details are consistent with the calibration certificates. All calibration certificates are submitted to DOE.				
Documentation provided by project participant				
Revised MR, version 02, dated 20/07/2021 Calibration Certificates				
DOE assessment				**Date: 05/08/2021**
Assessment team confirms that PP has updated the information of energy meters used for the current monitoring period in the revised Monitoring report Version 2.0 dated 20/07/2021. Hence accepted. CL #6 closed				

CL ID	07	Section no.	D.2	Date :12/07/2021
Description of CL				
1. PP is requested to clarify that the lab report submitted to DOE is calculating GCV and those values are used to calcúlate $NCV_{K,y}$in ER sheet. Kindly explain this inconsistency. 2. Assessment team has found that the formula applied to calculate (GCV or NCV) was not correct in the lab reports. Also the dates mentioned in lab report from September month were incorrect.				
Project participant response				**Date : 22/07/2021**
1. PP would like to clarify that the lab reports included the correct formula to calculate the calorific values. This can be verified from the lab calculation reports where application formulae are properly denoted. Hence, the reported values are for NCV only, not GCV. Since there are manually written references at plant level in the reports, so the remark as GCV is the common reference for calorific value which is the net calorific values only. 2. The formula applied to calculate NCV in the lab reports are consistent with the formulae prescribed under the PDD, which can be verified from the lab reports. Also, as mentioned above, the calculated values are only for NCV as application of formula is only specific to NCV. Also, monthly values are submitted to DOE from the recorded logs, which are submitted to DOE.				
Documentation provided by project participant				
Lab reports and plant logs for NCV				
DOE assessment				**Date: 05/08/2021**
PP has provided the appropriate explanation for the inconsistency found in the GCV and NCV value, and assessment team has checked all the lab reports to verify the same. Also the formula is found to be consistent with the PDD. Hence accepted. CL#7 closed.				

Table 3. CAR from this verification

CAR ID	01	Section no.	D	Date :12/07/2021

Description of CAR	Date : 12/07/2021
PP is requested to : 1. Follow the AMS I.D version 18.0 methodology and PDD version 09 format for the unit of the parameters in the table. 2. Follow the renewed PDD version 09 and AMS I.D version 18.0 methodology for the naming of the parameter in the table. 3. Provide the working hyperlink for CEA database in the footnote of "$EG_{OM,y}$ " parameter.	
Project participant response	**Date : 22/07/2021**
1. The formatting errors are removed now. Corrections are now made in the revised MR in line with the PDD. 2. The required corrections are now made in the revised MR in line with the PDD and as per applied methodology, AMS I.D, version 18. 3. Due to change in CEA website homepages, old links are now invalid. The updated operational links are now included.	
Documentation provided by project participant	
Revised MR, version 02, dated 20/07/2021	
DOE assessment	**Date: 05/08/2021**
Assessment team confirms that PP has incorporated all the corrections in the revised MR version 2.0 dated 20/07/2021. Hence accepted. CAR#1 closed	

CAR ID	02	Section no.	ER sheet	Date :12/07/2021
Description of CAR				**Date : 12/07/2021**
1. PP is requested to provide a correct reference document to assessment team from which values of EG_{Gross} and EG_{Aux} are taken as they did not match with the "Daily shiftwise data" sheet provided to team 2. PP is requested to provide documents of biomass consumed to assessment team for all the months covered under current monitoring period for verification 3. PP is requested to provide calculation for the individual values of biomass consumed in a particular month. 4. PP is requested to provide the logbook records of moisture % in biomass for all months to assessment team and also mention the calculation formula in ER sheet for verification.				
Project participant response				**Date : 22/07/2021**
1. The values are to be sourced from plant logbook records monthly sheets, instead of shiftwise data. As already explained under the CL 02 above, the shiftwise data sheets accounts values under three batches 6:00 to 14:00, 14:00 to 22:00 and 22:00 to 6:00. Whereas, the monthly billing cycle is done from 00:00 hours of start date to 24:00 of the end date (i.e. start and end reading at 00:00 hours of starting and closure readings). Therefore, the values can be referred from the daily logs included under the monthly sheets. Additionally, the starting and ending hours reading are also submitted to DOE for each month. In order to create an easy reference of cross check of the values, the daily logs and the start reading (at 00:00 hours) and end reading (at 24:00 hours) are separately shown in an excel sheet [ref. to the excel file "DAILY_SHIFTWASE_DATA (with cross checks)"]. This excel file is submitted to DOE from which it can be further verified that there is no inconsistency in the reported values. 2. Biomass consumption records are submitted in the form of plant log records. The supporting documents are submitted to DOE for entire monitoring period. 3. PP would like to clarify during the current MP, only one particular type of biomass (i.e. Mustard Husk) was used. The biomass consumption values are submitted separately for each month. 4. The biomass moisture content records are submitted for each month in the form of monthly log records. Since the value of the parameter to be sourced from lab log books and monthly logs are also submitted to DOE separately, hence final values reported in the ER sheet are not separately shown with any calculation. This has been also the practice since all previous monitoring periods.				
Documentation provided by project participant				

Revised ER sheet, version 02, dated 20/07/2021 Plant log sheets (both digitally archived and manual logs) “DAILY_SHIFTWASE_DATA (with cross checks)” excel sheet for cross check reference.
DOE assessment **Date: 05/08/2021**
1. PP has provided the appropriate explanation and plant log book records from where assessment team has checked the data in updated “DAILY_SHIFTWASE_DATA (with cross checks)” whose value is found to be consistent with the revised ER sheet. Hence accepted. 2. PP has provided the biomass consumption records to assessment team and their values are found to be consistent with the log records and ER sheet. Hence accepted. 3. PP has provided the appropriate clarification on the biomass consumed in the particular months. Hence accepted. 4. PP has provided the logbook records of moisture content to assessment team and they are found to be consistent with the ER sheet. Hence accepted. CAR #2 closed

CAR ID	03	**Section no.**	ER sheet	**Date : 10/09/2021**
Description of CAR				
As per the PDD, EGBL is calculated as EGexport - EGimport, and EGexport is calculated as EGgross - EGaux. Therefore, EGBL equals EGgross - EGaux - EGimport. However, from the ER spreadsheet it is observed that the values of EGBL are not calculated values and the values do not equal EGgross - EGaux - EGimport. The PP is requested to clarify: (a) how the baseline emission calculations in-line with the formula in the PDD; (b) the discrepancy between the values of EGexport that are measured and the values of EGgross - EGaux.				
Project participant response				**Date : 12/09/2021**

PP would like to clarify that the value for $EG_{BL,y}$ considered for ER calculation is directly taken from the Joint Meter Reading (JMR), instead of considering manually calculated value from the other parameters. This is because of two main reasons:

(i) as per registered PDD (section B.7.1), the value for the ex-post parameter $EG_{BL,y}$ is sourced from 'Joint Meter Reading' (JMR) generated by state utility and cross check procedure is prescribed as "sale receipt" (i.e. the invoice);hence the value of $EG_{BL,y}$ is consistent as per PDD, parameter table in section B.7.1 (i.e. consistent in both JMR and Sale Invoice)

(ii) the value for "$EG_{BL,y}$" taken from JMR & Invoice is found to be conservative as compared to the value derived using the two equations in the PDD, i.e. [$EG_{BL,y}= EG_{gross} – EG_{aux}– EG_{import}$].

Therefore, with regard to the particular two points above, PP would like to clarify as follows:

(a) The value reported in the JMR & invoice is based on the same energy meters prescribed under the registered monitoring table (i.e. RJB 89896 and RJB 89897), these meters record both Export & Import values. Here, the export value in the JMR is by default the adjusted value of 'auxiliary consumption' from the 'gross generation', which can be referred from the metering location diagram reported under Section C of the MR. The position of the Export/Import meter is #4 in the diagram, which is after the gross (#2) and auxiliary (#3) metering point. Thus, equation 1 of the PDD "$EG_{BL,y} = EG_{export} – EG_{import}$" and equation 2 of the PDD "$EG_{export} = EG_{gross} – EG_{import}$" both are fulfilled in the "$EG_{BL,y}$" value taken from the JMR & Invoice.

In order to present this transparently in the ER sheet, the ER sheet is now updated and references of equations are included in the sheet. Also, the consideration of conservative value has been justified in the ER sheet for better clarification.

(b) As described above, since the conservative estimation is considered by PP instead of the value derived from $EG_{gross} – EG_{aux}– EG_{import}$, hence the values for $EG_{BL,y}$in the ER sheet are found with inconsistency.

Additionally, there is difference in $EG_{BL,y}$value taken from JMR and value calculated from the 'equation 2'as "$EG_{gross} – EG_{aux}– EG_{import}$" . This is because, the JMR value is measured from the energy meters RJB 89896 and RJB 89897installed at switch yard and data recorded into the JMR by the Officials from State Utility is at different time of the day in each month; whereas the data for EG_{gross} and EG_{aux} are taken from the meters installed at plant side before the switchyard, which are electronically archived into the plant log at 00:00 hours and also recorded shiftwise manually (3 shifts per day). Thus, due to difference in time of records and different points/position of meter connections this variation in values is realized. However, this variation is only 0.47%, which is less than 1%.Nevertheless, it does not have any impact on ER as the value reported in the JMR & Invoice has been considered for ER calculation which is also conservative, as justified above.

This consideration and justification are also included in the MR (footnote reference #6) and also clarified in the ER sheet. The revised ER and MR versions are submitted to DOE.

Documentation provided by project participant	
Revised ER sheet, version 03, 11/09/2021 Revised MR, version 03, 11/09/2021	
DOE assessment	**Date: 14/09/2021**

The PP has submitted the revised MR and ER sheet. Based on review of MR and ER sheet along with justification provided by the PP as in above response, it is found that

(a) The value reported in the JMR & invoice is based on the energy meters as prescribed under the registered monitoring table (i.e. RJB 89896 and RJB 89897); these meters record both Export & Import values. Here, the export value in the JMR is by default the adjusted value of 'auxiliary consumption' from the 'gross generation', which was referred from the metering location diagram reported under Section C of the MR. The position of the Export/Import meter is #4 in the diagram, which is after the gross (#2) and auxiliary (#3) metering point. Therefore, the equation 2 of the registered PDD "$EG_{BL,y} = EG_{export} – EG_{import}$" and equation 3 of the PDD "$EG_{export} = EG_{gross} – EG_{aux}$" both are fulfilled in the "$EG_{BL,y}$" value taken from the JMR/Invoice.

(b) The verification team further assessed that this difference in $EG_{BL,y}$ value (i.e. the values taken from JMR and values calculated from the 'equation 2' as "$EG_{gross} – EG_{aux} – EG_{import}$") is only about 0.47%, which is less than 1%.The verification team reviewed that the JMR value is measured from the energy meters RJB 89896 and RJB 89897 installed at switch yard, whereas value for EG_{gross} and EG_{aux} are taken from the meters installed at plant side before the switchyard. Additionally, the readings in the JMR (i.e. export & import) are taken by the Officials of the State Utility at different time of the day in each month; whereas the data for EG_{gross} and EG_{aux} are electronically archived into the plant log at 00:00 hours and also recorded shift-wise manually into the logs. All these values were reviewed during the verification.
Thus, discrepancy in values are not manual or due to any computation error. Instead, this slight variation (i.e. 0.47%) is due to difference in time of records and different position of meters. Therefore, DOE is able to confirm that this variation is negligible and it does not have any impact on ER estimate as the value reported in the JMR & Invoice has been considered for ER calculation which is also the conservative, as discussed above.

Based on above review and discussion , it is found to be correct and accepted based on most conservative approach adopted by the PP. Hence, CAR#3 closed.

Table 4. FAR from this verification

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

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Document information

Version	*Date*	*Description*
04.0	6 April 2021	Revision to: • Reflect the "Clarification: Regulatory requirements under temporary measures for post-2020 cases" (CDM-EB109-A01-CLAR).
03.0	31 May 2019	Revision to: • Ensure consistency with version 02.0 of the "CDM validation and verification standard for project activities" (CDM-EB93-A05-STAN); • Make structural and editorial improvements.
02.1	11 January 2018	Editorial revision to correct the numbering of appendices in the instructions.
02.0	31 October 2017	Revision to align with the requirements of the "CDM validation and verification standard for project activities" (version 01.0).
01.0	23 March 2015	Initial publication.

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