
 <b>Verification and certification report form for CDM project activities (Version 04.0)</b>			
Complete this form in accordance with the instructions attached at the end of this form.			
<b>BASIC INFORMATION</b>			
<b>Title and UNFCCC reference number of the project activity</b>	Grid connected electricity generation using natural gas by Lanco Kondapalli Power Private Limited (UNFCCC Ref. No. 5554)		
<b>Scale of the project activity</b>	<input checked="" type="checkbox"/> Large-scale <input type="checkbox"/> Small-scale		
<b>Version number of the verification and certification report</b>	02		
<b>Completion date of the verification and certification report</b>	16/07/2021		
<b>Monitoring period number and duration of this monitoring period</b>	Monitoring period No.: 03 01/11/2015 to 31/12/2016 (inclusive of both days)		
<b>Version number of the monitoring report to which this report applies</b>	02		
<b>Crediting period of the project activity corresponding to this monitoring period</b>	05/09/2012 to 04/09/2022 (Fixed) <sup>1</sup>		
<b>Project participants</b>	M/s Lanco Kondapalli Power Private Limited EKI Energy Services Limited		
<b>Host Party</b>	India		
<b>Applied methodologies and standardized baselines</b>	<b>Methodology:</b> AM0029 ver. 3 - Baseline Methodology for Grid Connected Electricity Generation Plants using Natural Gas <b>Standardized Methodology:</b> Not Applicable		
<b>Mandatory sectoral scopes</b>	1: Energy industries (renewable-/ non-renewable sources)		
<b>Conditional sectoral scopes, if applicable</b>	NA		
<b>Estimated amount of GHG emission reductions or GHG removals for this monitoring duration in the registered PDD</b>	971,142 tCO <sub>2</sub> e		
<b>Certified amount of GHG emission reductions or GHG removals for this monitoring period</b>	Amount before 1 January 2013	Amount from 1 January 2013 until 31 December 2020	Amount from 1 January 2021
	0 tCO <sub>2</sub> e	74,009 tCO <sub>2</sub> e	0 tCO <sub>2</sub> e
<b>Name and UNFCCC reference number of the DOE</b>	LGA Technological Center, S.A. (Applus+ Certification) UNFCCC Ref. No. : E-0032		
<b>Name, position and signature of the approver of the verification and certification report</b>	Mr. Agustín Calle de Miguel Applus+ Certification CDM Technical Manager Signature: 		

<sup>1</sup> <https://cdm.unfccc.int/Projects/DB/RWTUV1323884893.28/view>

## SECTION A. Executive summary

The project activity involves implementation and operation of a new natural gas fired grid connected Combined Cycle Power Plant (CCPP) of 366 MW capacity at Village Kondapalli near Vijayawada in the state of Andhra Pradesh in India by M/s Lanco Kondapalli Power Private Limited (LKPPL).

The CCPP operates on Brayton Cycle (Compressor & Gas Turbine) at top and Rankine Cycle (Heat Recovery Steam Generator & Steam Turbine) at bottom. The power generated from the project activity is sold on merchant basis to the state utilities in Southern, Western & Northern India. The project employs state of the art technology with estimated project life of 20 years.

During the reported monitoring period from 01/11/2015 to 31/12/2016 (inclusive of both the dates) the project activity has supplied 171215.73 MWh of electricity, and thus contributing to the GHG reductions of 74,009 tCO<sub>2</sub>e.

### **1. Verification Scope:**

The verification scope encompasses an independent and objective review and ex-post determination of the monitored reductions in GHG emissions by the DOE. The verification is based on the submitted monitoring report, the validated and registered PDD as well as its validation report, the applied monitoring methodology, relevant decisions, clarifications and guidance from the CMP and the EB and any other information and references relevant to the project activity's resulting emission reductions. These documents are reviewed against the requirements of the Kyoto Protocol, the CDM Modalities and Procedures and related rules and guidance. Based on the requirements in the CDM validation and verification standard for project activities, Version 02.0 for the project activity, Applus+ Certification has applied a rule-based approach for the verification of the project. The principles of accuracy, completeness, relevance, reliability and credibility were combined with a conservative approach to establish a traceable and transparent verification opinion. The verification considers both quantitative and qualitative information on emission reductions. The verification is not meant to provide any consultancy towards the client. However, stated requests for clarifications, corrective and/or forward actions may provide input for improvement of the monitoring activities.

### **2. Methodology:**

LGAI Technological Center, S.A. (Applus+ Certification) – hereinafter referred as Applus+ Certification - approach to the verification is a two-stage process.

In the 1<sup>st</sup> stage, Applus+ Certification completed a strategic review and risk assessment of the projects activities and processes in order to gain a full understanding of:

- Activities associated with all the sources contributing to the project emissions and emission reductions, including leakage if relevant;
- Protocols used to estimate or measure GHG emissions from these sources;
- Collection and handling of data;
- Controls on the collection and handling of data;
- Means of verifying reported data; and
- Compilation of the monitoring report.

Applus+ Certification used a Periodical Verification Checklist, based on the risk-based assessment of the parameters and data collection and handling processes for each of those parameters, describes the verification approach and the sampling plan.

### **3. Desk Review**

In the 2<sup>nd</sup> stage, using the Verification Checklist, Applus+ Certification verified the implementation of the monitoring plan and the data presented in the Monitoring Report for the period in question. This involved a site visit and desk review of the Monitoring Report. This Verification Report describes the findings of this assessment.

The Monitoring Report version 1.0 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 registered PDD 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.

### **4. Assessment team**

According to the sectoral scope / technical area and experience in the sectoral or national business environment, LGAI Technological Center, S.A. (Applus+ Certification) has composed a project assessment team in accordance with the appointment rules in the internal Quality Management System of LGAI Technological Center, S.A. (Applus+ Certification).

The composition of audit team shall be approved by the LGAI Technological Center, S.A. (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	Role	SS Coverage	TA Coverage	Financial aspect
Mr. Pankaj Kumar	LA/TE	YES	YES	NA
Mr. Simon Shen	TR	YES	YES	NA

The curriculum vitae of the DOE's Verification team members are provided in Appendix 2 of this report.

### **5. Review of Documentation:**

The Monitoring Report version 1.0 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. A cross-check between information provided and information from other sources has been done. A complete list of documents reviewed is available in Appendix 3 of this report.

## **6. On-site Assessment and follow-up Interviews:**

As a part of the verification, the assessment team has performed the on-site inspection. The objective of the on-site assessment is to:

- Confirm the implementation and operation of the project;
- Review the data flow for generating, aggregating and reporting the monitoring parameters;
- Confirm the correct implementation of procedures for operations and data collection;
- Cross-check the information provided in the MR documentation with other sources;
- Check the monitoring equipment against the requirements of the PDD and the approved methodology, including calibrations, maintenance, etc.
- Review the calculations and assumptions used to obtain the GHG data and ER;
- Identify if the quality control and quality assurance procedures are in place to prevent or correct errors or omissions in the reported parameters.

The details are mentioned in section D.2 of this report.

## **7. Quality of Evidences**

Sufficient evidence covering the full verification period in the required frequency is available to verify the figures stated in the final MR. The source of the evidences will be discussed in Appendix 3 of this report. Specific crosschecks have been done in cases that further sources were available. The assessment team against the raw data checked the monitoring report's figures. The data collection system meets the requirements of the monitoring plan as per the methodology.

## **8. Reporting of Findings**

As an outcome of the verification process, the assessment team can raise different types of findings.

Where a non-conformance arises the assessment team shall raise a Corrective Action Request (CAR). A CAR is issued, where:

- a. Modifications to the implementation, operation and monitoring of the registered project activity has not been sufficiently documented by the project participants;
- b. Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impact the quantity of emission reductions;
- c. Issues identified in a FAR during validation to be verified during verification or previous verification(s) have not been resolved by the project participants.

The assessment team shall raise a Clarification Request (CL) if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

All CARs and CLs raised during verification shall be resolved prior to submitting a request for issuance.

Forward Action Requests (FARs) may be raised during verification for actions where the monitoring and reporting require attention and/or adjustment for the next verification period. All the CARs/CLs/FARs are being discussed in Appendix 4 of this report.

## **9. Internal Quality Control**

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 Manager. 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 of issuance is submitted to CDM EB along with the requisite documents.

**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	OR	Kumar	Pankaj	True Quality Certifications Private Limited- Outsourced entity	Yes	Yes	Yes	Yes

**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	EI	Shen	Simon	Applus+ Certification
2.	Approver	IR	Calle de Miguel	Agustin	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	Human errors: Readings from Meters (if not automatic)	LOW	Human error is likely to occur if the monitoring personnel are not trained well or inexperienced in data recording procedures and monitoring processes.	All the personnel are well trained to monitor and collect data and thus, the risk associated with Human error is minimized. Assessment team checked the training records to confirm that all the personnel are well trained to handle the activities related to monitoring. Assessment team checked the training records for the complete monitoring period and confirm that the personnel are well trained to monitor and collect data for the project activity.
2	Human error: Quantification of emission reduction	LOW	Use of spreadsheets without adequate data control, changes/updates, version tracking, traceability and security	All the JMR/Credits Notes (Monthly meter report) sheets and the invoices for the complete monitoring period are checked and thus the assessment team confirms that the ER value is conservative and correct.

### C.2. Consideration of materiality in conducting the verification

In line with Guidelines for Application of materiality in verifications, the verification team has conducted a complete verification of all the information presented in the monitoring report and data monitored as presented in the emission reduction calculation spreadsheet. There are no material errors, overestimation of ER, omission or misstatement.

## SECTION D. Means of verification

### D.1. Desk/document review

The verification was performed primarily based on the review of the monitoring report and the supporting documentation. This process included review of data and information presented to verify their completeness and review of the monitoring plan and monitoring methodology, paying particular attention to the frequency of measurements, the quality of metering equipment used including calibration requirements, and the QA/QC procedures, and an evaluation of data management and the QA/QC system in the context of their influence on the generation and reporting of emission reduction.

The initial MR Version 1 submitted by the project participant and additional background documents related to the emission reductions are reviewed as an initial step of the verification process. The subsequent step involved the identification of corrective action requests, clarification requests and Forward action request (CAR, CL and FAR) which are presented in Appendix 4 of this report. As a result of these findings, the MR is revised to MR Version 2. A complete list of all documents and records reviewed is as attached in Appendix 03 of this report.

### D.2. On-site inspection

Duration of on-site inspection: 26/03/2021				
No.	Activity performed on-site	Site location	Date	Team member
1.	<p>The verification team conducted site visit to confirm the information and to resolve issues identified in the document review. This involved:</p> <ol style="list-style-type: none"> <li>1) an assessment of the implementation and operation of the CDM project activity as per the registered PDD</li> <li>2) a review of information flows for generating, aggregating and reporting of the monitoring parameters</li> <li>3) interviews with relevant personnel to confirm that the operational and data collection procedures are implemented in accordance with the Monitoring Plan</li> <li>4) a cross-check between information provided in the MR and data from other sources</li> <li>5) a check of the monitoring equipment including calibration performance, and observations of monitoring practices against the requirements of the PDD and the applied methodology</li> <li>6) a review of calculations and assumptions made in determining the GHG data and ERs, and</li> <li>7) an identification of QA/QC procedures in</li> </ol>	The project is located at Village Kondapalli, Krishna District of Andhra Pradesh	26/03/2021	Pankaj Kumar

	place to prevent, or identify and correct, any errors or omissions in the reported monitoring parameters			
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### D.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Moorthy	S. Sundara	PP representative	26/03/2021	As mentioned above in section D.2 of this report	Mr. Pankaj Kumar
2.	Rao	A.Achyuta	PP representative		As mentioned above in section D.2 of this report	
3.	Babu	A.Suresh	PP representative		As mentioned above in section D.2 of this report	
4.	Reddy	V. Prakash	Local Stakeholder		As mentioned above in section D.2 of this report	
5.	Rao	R. Bapu	Local Stakeholder		As mentioned above in section D.2 of this report	
6.	Ahmed	Md. Nadeem	Local Stakeholder		As mentioned above in section D.2 of this report	

### D.4. Sampling approach

No sampling is used as the verification team has visited site along with the substations. The verification team has reviewed all the documents like commissioning certificates, JMR (monthly reports) sheets, invoices etc.

### 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	00	01	00
Compliance of the project implementation and operation with the registered PDD	00	00	00
Post-registration changes	00	00	00
Compliance of the registered monitoring plan with the methodologies including applicable tools and standardized baselines	00	00	00
Compliance of monitoring activities with the registered monitoring plan	00	02	00
Compliance with the calibration frequency requirements for measuring instruments	00	01	00
Assessment of data and calculation of emission reductions or net removals	00	00	00
Assessment of reported sustainable development co-benefits	00	00	00
Global stakeholder consultation	00	00	00



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<b>Areas of verification findings</b>	<b>No. of CL</b>	<b>No. of CAR</b>	<b>No. of FAR</b>
Others (please specify) – ER calculation sheet	00	01	00
<b>Total</b>	<b>00</b>	<b>05</b>	<b>00</b>

## SECTION E. Verification findings

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

<b>Means of verification</b>	The verification team has determined whether the monitoring report was completed using the valid version of the applicable monitoring report form. The verification team has checked whether all the sections of the monitoring report follows the guidelines provided in the template.
<b>Findings</b>	CAR 01 raised and resolved during the current verification. Please refer Appendix 4 of this report for the detail closure of the CAR.
<b>Conclusion</b>	The MR was web hosted in version 07.0 of the MR form, which is not the current and active version in the UN platform. PP has now used the latest version of the MR template available on the UNFCCC website i.e. version 08.0. The monitoring report has been prepared as per the instructions provided in the template. DOE has made the version 1 of the monitoring report covering the monitoring period 01/11/2015 to 31/12/2016 (inclusive of both dates) publicly available through its dedicated interface on the UNFCCC CDM website on 17/02/2021 i.e. before undertaking the site visit for the verification. The verification team has concluded that the monitoring report was completed using the valid version of the applicable monitoring report form and is followed the guidelines contained in the template.

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

This is the 3<sup>rd</sup> periodic verification of the project activity. No FAR was raised during the validation and previous verifications of this project.

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

<b>Means of verification</b>	The verification team determined the conformity of the actual implemented project activity and its operation with the registered project design document. DOE has, by means of a desk review and an on-site visit, assessed whether all physical features of the proposed CDM project activity proposed in the registered PDD are in place, and that the project participants have operated the CDM project activity as per the registered PDD.			
<b>Findings</b>	CAR 05 raised and resolved during the current verification. Please refer Appendix 4 of this report for the detail closure of the CAR.			
<b>Conclusion</b>	The verification team has reviewed the commissioning certificates to conclude that the capacity of the project is same as mentioned in the registered PDD. The capacity does not change after the registration of the project activity as confirmed by the assessment team during verification site visit. Project activity is in continuous operation. The situation of continuous operation is confirmed during site visit and evident from Breakdown log sheets. No major breakdown was found. Scheduled & preventive maintenance were carried out as per manufacturer specification for the power plant. No unforeseen activity observed during the present verification that can alter the applicability or additionality of the applied methodology. The details are checked by the assessment team from the plant log records and found correct.			
	Assessment team also checked the relevant implementation status of the project activity and confirm that detail as presented in the MR is correct. The project commissioning date and locations are described below along with the latitude and longitude.			
<b>Project Location</b>		<b>Latitude</b>	<b>Longitude</b>	<b>Commissioning date</b>

Village Kondapalli,  
Krishna, District of  
Andhra Pradesh

16°38'30.10" N

80°33'05.33" E

01/08/2010

The assessment team checked the above details during the verification site visit & review of commissioning certificates. The same are found in-line with registered PDD. The detail also forms the part of Monitoring report and thus acceptable to the assessment team.

Assessment team checked the technical specification and details of the power plant during the onsite visit. The details are checked from the manufacturer technical specification as well as from the physical visit. The detail as mentioned in the registered PDD is correct and the same is mentioned in the MR version 2. Technical specification of equipments involved in the project activity is as below:

S.No	Equipment	Specifications	Special Features
1.	GTG	Make : GE, USA GTG is of advanced class industrial heavy- duty type (Model 9FA) with dry low NO <sub>x</sub> technology capable of operating in combined cycle mode, Nominal output capacity: 234 MW at site conditions (Dry Bulb Temperature - 32 deg. C; Design Wet Bulb Temperature - 25 deg. C; Relative Humidity (RH) = 70%)	Low NO <sub>x</sub> technology along with state of the art cooling. Thermal efficiency close to 53 - 58% (LHV)
2.	STG	Make: Harbin, China One steam turbine generator of output capacity 132 MW at site condition (Dry Bulb Temperature - 32 deg. C; Design Wet Bulb Temperature - 25 deg. C; Relative Humidity (RH) = 70%)	<ul style="list-style-type: none"> <li>• Multistage, intermediate injection, condensing type steam turbine.</li> <li>• State of the art DCS control system</li> </ul>
3.	HRS	Make: : Thermax , India Capacity: : HP/IP/LP Flow 282.79/ 42/34.26 TPH; temperature 567.3/567/286.6 DegC; pressure 98.47/22.4/3.1 Bar	<ul style="list-style-type: none"> <li>• Horizontal flue gas flow and natural circulation.</li> <li>• HRSGs are designed with three pressure stages to improve thermal efficiency, against conventional two pressure stages for similar application.</li> <li>• State of the art DCS control system.</li> </ul>

The plant undergone scheduled maintenance as per the manufacturer's specifications and no unforeseen incident observed by the assessment team during the monitoring period. The details are checked by the assessment team from the plant log records and found correct.

Based on the documentary evidence of commissioning certificates and physical verification, DOE concludes that the project was implemented as per the registered PDD.

**E.4. Post-registration changes****E.4.1. Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents<sup>2</sup>**

Not applicable for present Monitoring period.

**E.4.2. Corrections**

Not applicable for present Monitoring period.

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

Not applicable for present Monitoring period.

**E.4.4. Inclusion of a monitoring plan**

Not applicable for present Monitoring period.

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

Not applicable for present Monitoring period.

**E.4.6. Changes to the project design**

Not applicable for present Monitoring period.

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

Not applicable for present Monitoring period.

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

<b>Means of verification</b>	The verification team determined whether the registered monitoring plan is in accordance with the applied methodology AM0029 ver. 3 - Baseline Methodology for Grid Connected Electricity Generation Plants using Natural Gas including applicable tools.
<b>Findings</b>	There is no CAR/CL raised in this section.
<b>Conclusion</b>	The verification team is able to confirm that the monitoring plan contained in the registered PDD is in accordance with the approved methodology applied by the project activity, i.e. AM0029 ver. 3 - Baseline Methodology for Grid Connected Electricity Generation Plants using Natural Gas and its applicable tools. The same is followed onsite and thus assessment team confirms that project activity comply with the requirement of approved methodology and registered PDD.

**E.6. Compliance of monitoring activities with the registered monitoring plan****E.6.1. Data and parameters fixed ex ante or at renewal of crediting period**

<b>Means of verification</b>	The assessment team checked the registered PDD to confirm the ex-ante fixed parameter mentioned in the current monitoring report. Assessment team also interviewed site personnel whether monitoring has been to check further regarding the ex-ante values used for emission reduction calculation.
<b>Findings</b>	There is no CAR/CL raised in this section.

<sup>2</sup> 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).

<b>Conclusion</b>	<p>Parameters such as <math>EF_{BM,y}</math>, <math>EF_{OM,y}</math>, <math>EF_{BL,CO2,f,y}</math>, Oxidation Factor of Natural Gas, Station Heat Rate of the Project activity, Emission factor of Coal, Lignite, Diesel, Oil, Natural Gas., Oxidation factor of coal, Calorific values of Coal, Lignite, Diesel, Oil and Natural Gas Naphtha, <math>\eta_{BL}</math>, Fuel consumption in coal fired power plants using sub-critical technology in the southern region, Electricity Generation from coal-fired power plants using sub-critical technology in the Southern Region and CO<sub>2</sub> emissions from Build Margin Power plants in the southern region were fixed as ex-ante. Assessment team checked the values, source of data, choice of data, purpose of the data mentioned in the MR from the registered PDD and confirms that the similar approach was considered for the current monitoring period also.</p> <p><b>The value of Build Margin Emission Factor of the grid in tonnes of CO<sub>2</sub> per MWh (<math>EF_{BL,CO2,y}</math>) and Build Margin Emission factor (<math>EF_{BM,y}</math>), Operating Margin Emission Factor (<math>EF_{OM,y}</math>) was considered from the CO<sub>2</sub> baseline database published by Central Electricity Authority (CEA. The value of emission factor 0.8723 tCO<sub>2</sub>/MWh is lower and the same is considered as a conservative approach. The same is acceptable to the assessment team.</b></p>
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### E.6.2. Data and parameters monitored

<b>Means of verification</b>	<p>The assessment team checked the registered PDD to confirm the ex-post parameter mentioned in the current monitoring report. Assessment team also interviewed the personnel onsite to check further regarding the ex-post parameter monitoring and confirms that the same is in line with the registered PDD. AM0029 ver. 3 - Baseline Methodology for Grid Connected Electricity Generation Plants using Natural Gas which was the applied methodology during the registration of the project is also checked to ensure that monitoring parameter as mentioned in the registered PDD and current MR are in compliance with the methodology.</p>
<b>Findings</b>	<p>CAR 02 raised and resolved during the current verification. Please refer Appendix 4 of this report for the detail closure of the CAR.</p>
<b>Conclusion</b>	<p>As per the registered monitoring plan and requirement of the registered methodology following parameters needs to be monitored:</p> <ol style="list-style-type: none"> <li><b><math>FC_{t,y}</math> - Total volume of natural gas combusted in the project plant:</b> The quantity of Natural Gas is measured by the gas flow meter, which is installed by RGTIL. The value will be taken from gas tickets received from RGTIL. The values will be correlated with fortnight joint ticket received from RGTIL fortnightly. Assessment team checked the same and found that the flow measurement is as per the registered PDD. The monitoring plan as mentioned in the registered PDD is followed onsite for the present parameter and thus assessment team concludes that the parameter measurement is as per the registered PDD.</li> <li><b><math>NCV_{t,y}</math> - The net calorific value (energy content) per volume unit of natural gas:</b> The Supplier provided the value of the NCV in the joint tickets that is being given to the PP. Assessment team checked the same and found that the NCV measurement is as per the registered PDD. The monitoring plan as mentioned in the registered PDD is followed onsite for the present parameter and thus assessment team concludes that the parameter measurement is as per the registered PDD.</li> <li><b><math>EG_{PJ,y}</math> - Net electricity supplied by the project plant to grid during the year y:</b> The electronic meters installed at the grid inter connection point at 400 kV PGCIL Nunna sub-station. The joint meter reading indicating the net energy exported in the month are recorded and signed by LKPPL and PGCIL authorities at the end of each joint reading. The verification team concluded that the values reported in the Monitoring report is appropriate. The monitoring plan as mentioned in the registered PDD is followed onsite</li> </ol>

	<p>for the present parameter and thus assessment team concludes that the parameter measurement is as per the registered PDD.</p> <ol style="list-style-type: none"> <li>4. <b>OXID<sub>f</sub> - Oxidation factor of Natural Gas:</b> The verification team has accepted this value as it has been sourced from the latest IPCC source available during current monitoring period. Thus the verification team was able to conclude that the value reported in the Monitoring report is appropriate.</li> <li>5. <b>COEF<sub>f,y</sub> - CO2 emission coefficient:</b> The verification team noted that the calculation of CO2 emission coefficient, COEF<sub>NG,y</sub> has been correctly done using the formulae in the sheet "Emission reduction". Thus the verification team was able to conclude that the value reported in the Monitoring report is appropriate.</li> <li>6. <b>EF<sub>BL, upstream, CH4</sub> - Emission factor for upstream fugitive methane emissions</b> occurring in the absence of the project activity electricity generation in terms of ton of methane per MWh. This data is computed annually based on latest CEA available information and is archived in electronic/paper form hence, found appropriate and correct and accepted by the verification team.</li> <li>7. <b>EF<sub>BM,y</sub> - Build Margin Emission factor for Southern grid:</b> This is calculated parameter as per monitoring methodology AM0029, ver. 3. Based on CO2 Baseline database for the Indian power sector, version 13. The Option A – Build Margin found lowest emission factor among three options given by the baseline methodology. The database is Government of India's official publication based on the "Tool to calculate the emission factor for an electricity system". Hence, found most authentic. The verification team has checked the calculations and found to be correct and hence accepted the value of project emissions</li> <li>8. <b>EF<sub>CO2,f,y</sub> - Emission factor of natural gas:</b> The value of the emission factor of natural gas has been sourced from the latest version of IPCC Guidelines available during the current monitoring period and hence accepted by the verification team having checked the correctness of value with the source of information. Thus the verification team was able to conclude that the value reported in the Monitoring report is appropriate</li> </ol>
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### E.6.3. Implementation of sampling plan

<b>Means of verification</b>	The verification assessed whether the compliance of the sampling efforts and surveys with the registered sampling plan in accordance with the "Standard for sampling and surveys for CDM project activities and programme of activities" if PP had applied a sampling approach to determine data and parameters monitored.
<b>Findings</b>	There is no CAR/CL raised in this section.
<b>Conclusion</b>	PP did not apply sampling plan to determine data and parameters monitored during this monitoring period. The verification team has checked all the documents such as JMR report, invoice etc. and hence sampling plan was not required. The verification team hereby confirms that are checked all the documents

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

<b>Means of verification</b>	The verification team determined whether the calibration of the measuring equipment that has an impact on the claimed emission reductions is conducted by the PP at a frequency specified in the registered monitoring plan
<b>Findings</b>	CAR 04 was raised during the verification process and closed successfully. Please refer Appendix 4 of this report for the detail closure of the CAR.
<b>Conclusion</b>	Assessment team checked the calibration reports of all the monitoring parameters

and has the following observation:

**Calibration details of the Energy meters:** Assessment team confirms that the energy meters installed at the substation are of accuracy class of 0.2s and are calibrated as per the national standards followed by the electricity board, but they are calibrated at least once in a five year. The calibration of the energy meters installed at HT side of the transformer were carried out by Meter and testing division of the electricity board which is 3rd party organization and the same is acceptable to the assessment team. The Meter and testing division of the electricity board is accredited by Indian national laboratory to carry out the testing of the meters, which is as per the national regulation, and thus traceability of the calibration is also confirmed by the assessment team. No delay in calibration observed for the current monitoring period.

**The calibration details of the Export/Import Energy Meter are given below:**

**Lanco Line 1**

Details	Main Meter	Check Meter
Serial No.	NP-5533 A	NP 5627 A
Make	L & T	L & T
Accuracy class	0.2s	0.2s
Calibration frequency	Once in 5 years	Once in 5 years
Last Calibration date	08/05/2012	09/05/2012
Calibration due date	08/05/2017	09/05/2017

**Lanco Line 2**

Details	Main Meter	Check Meter
Serial No.	NP-5543 A	NP 5489 A
Make	L & T	L & T
Accuracy class	0.2s	0.2s
Calibration frequency	Once in 5 years	Once in 5 years
Last Calibration date	09/05/2012	08/05/2012
Calibration due date	09/05/2017	08/05/2017

**The calibration details of the meters are given below:**

*Gas flow Meter Calibration details:*

Location/Type	Meter Serial No.	Make	Accuracy Class	Last Calibration date	Valid till
Reliance Gas Flow Meter Stream 1	08-040024	Emerson Process	±0.23%	15/04/2015	14/04/2016
				27/01/2016	26/01/2017
Reliance Gas Flow Meter Stream 2	08-040025	Emerson Process	±0.23%	14/04/2015	13/04/2016
				27/01/2016	26/01/2017
PP side Check Meter	9090448	Daniel Measurement	±0.13%	17/04/2015	16/04/2016
				27/01/2016	26/01/2017

*Pressure Transmitter and Temperature Transmitter and Gas chromatograph calibration:*

Location/Type	Meter Serial No.	Make	Accuracy Class	Last Calibration date	Valid till
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	Pressure Transmitter for Reliance Gas Flow Meter Stream 1	1793074	Rosemount	+/- 0.075%	26/10/2015	25/10/2016
					27/01/2016	26/01/2017
	Pressure Transmitter for Reliance Gas Flow Meter Stream 2	1793066	Rosemount	+/- 0.075%	26/10/2015	25/10/2016
					27/01/2016	26/01/2017
	Temperature Transmitter Reliance Gas Flow Meter Stream 1	1793065	Rosemount	± 0.1 °C	26/10/2015	25/10/2016
					27/01/2016	26/01/2017
	Temperature Transmitter Reliance Gas Flow Meter Stream 2	1793985	Rosemount	± 0.1 °C	26/10/2015	25/10/2016
					27/01/2016	26/01/2017

Calibration details of Gas chromatograph:

Location/Type	Meter Serial No.	Calibration date	Valid till
Gas Chromatograph	21482-1	26/10/2015	25/10/2016
		27/01/2016	26/01/2017

Assessment team noted that as per registered PDD, there is no any calibration frequency mentioned for Pressure Transmitter, Temperature Transmitter and Gas chromatograph. The calibration of PT, TT and Gas Chromatograph is carried out by RGTIL. The calibration is done as per the OEM guideline. Thus gas supplier conservatively followed calibration once in a month and for operational period of the power plant only. The above calibration details are for project activity operational period only.

Gas data and NCV of gas is taken directly from Gas Supplier. The NCV of gas is measured by using online gas chromatograph installed by gas supplier. As per OEM guidelines, the metering equipment's are installed and maintained. Since PDD does not mention any specific calibration frequency, the calibration is in supplier scope and PP do not have any control on it. Verification team crosschecked the calibration certificates issued by Yadav Measurements Pvt. Ltd., thus traceability of the calibration is also confirmed by the assessment team.

## 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

<b>Means of verification</b>	The verification team assessed whether the data and calculations of GHG emission reductions achieved resulting from the registered CDM project activity. The verification team has checked whether calculations of baseline GHG emissions have been carried out in accordance with the formulae and methods described in the registered monitoring plan.
<b>Findings</b>	CAR 03 was raised during the verification process and closed successfully. Please refer Appendix 4 of this report for the detail closure of the CAR.
<b>Conclusion</b>	The baseline emissions are calculated as below :



$$\begin{aligned}
 BE_y &= EG_{PJ,y} * EF_{BL,CO_2,y} \\
 &= 171,215.73 \text{ MWh} * 0.8723 \text{ tCO}_2/\text{MWh} \\
 &= 149,351 \text{ tCO}_2 \text{ (round-down value)}
 \end{aligned}$$

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

<b>Means of verification</b>	The verification team assessed whether the data and calculations of GHG emission reductions achieved resulting from the registered CDM project activity. The verification team has checked whether calculations of project GHG emissions have been carried out in accordance with the formulae and methods described in the registered monitoring plan.
<b>Findings</b>	No findings raised
<b>Conclusion</b>	<p>Project emission calculation as per the registered PDD is mentioned below:</p> $  \begin{aligned}  COEF_{f,y} &= NCV_{f,y} * EF_{CO_2,f,y} * OXID_f \\  &= 0.036865 \text{ GJ/sm}^3 * 0.0561 \text{ tCO}_2/\text{GJ} * 1 \\  &= 0.0020681 \text{ tCO}_2/\text{sm}^3  \end{aligned}  $ $  \begin{aligned}  PE_y &= FC_{f,y} * COEF_{f,y} \\  &= 33,226,519.65 \text{ sm}^3 * 0.0020681 \text{ tCO}_2/\text{sm}^3 \\  &= 68,716 \text{ tCO}_2 \text{ (round-up value)}  \end{aligned}  $ <p>The calculation is checked from the actual emission reduction sheet and found correct.</p>

### E.8.3. Calculation of leakage GHG emissions

<b>Means of verification</b>	The verification team assessed whether the data and calculations of GHG emission reductions achieved resulting from the registered CDM project activity. The verification team has checked whether calculations of baseline GHG emissions, project GHG emissions and leakage GHG emissions have been carried out in accordance with the formulae and methods described in the registered monitoring plan.
<b>Findings</b>	No findings were raised.
<b>Conclusion</b>	<p>Leakage emission calculation as per the registered PDD is mentioned below: As per registered PDD, The total leakage emissions are Leakage emissions due to fugitive upstream CH<sub>4</sub> emissions (LE<sub>CH<sub>4</sub>,y</sub>) and Leakage emissions due to fossil fuel combustion/electricity consumption associated with the liquefaction, transportation, re -gasification and compression of LNG into a natural gas transmission or distribution system (LE<sub>LNG,CO<sub>2</sub>,y</sub>) are calculated as below:</p> <p>Thus, LE<sub>y</sub> = LE<sub>CH<sub>4</sub>,y</sub> + LE<sub>LNG,CO<sub>2</sub>,y</sub></p> <p>As per registered PDD, Leakage emissions due to fugitive upstream CH<sub>4</sub> emissions are calculated as below</p> $  \begin{aligned}  LE_{CH_4,y} &= [FC_{f,y} * NCV_{f,y} * EF_{NG, upstream, CH_4} - EG_{PJ,y} * EF_{BL, upstream, CH_4}] * GWP_{CH_4} \\  &= [33,226,519.65 \text{ sm}^3 * 0.036865 \text{ GJ/m}^3 * 0.000296 \text{ tCH}_4/\text{GJ} - 171,215.73 \text{ MWh} \\  &\quad * 0.0005698 \text{ tCH}_4/\text{MWh}] * 25 \\  &= 6,625.03 \text{ tCO}_2  \end{aligned}  $

	<p>Leakage emissions due to fossil fuel combustion / electricity consumption associated with the liquefaction, transportation, re -gasification and compression of LNG into a natural gas transmission or distribution system (<math>LE_{LNG,CO_2,y}</math>) is calculated as below:</p> $LE_{LNG,CO_2,y} = FC_{LNG,y} * EF_{CO_2, upstream,LNG}$ $= 0.00 \text{ TJ} * 6 \text{ t CO}_2 / \text{TJ} = 0 \text{ tCO}_2$ $LE_y = LE_{CH_4,y} + LE_{LNG,CO_2,y}$ $= 6,625.03 \text{ tCO}_2 + 0 \text{ tCO}_2 = 6,626 \text{ tCO}_2 \text{ (round-up value)}$ <p>The calculation is checked from the actual emission reduction sheet and found correct.</p>
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#### E.8.4. Summary calculation of GHG emission reductions or net anthropogenic GHG removals by sinks

<b>Means of verification</b>	The verification team assessed whether the data and calculations of GHG emission reductions achieved resulting from the registered CDM project activity. The verification team has checked whether calculations of baseline GHG emissions, project GHG emissions and leakage GHG emissions have been carried out in accordance with the formulae and methods described in the registered monitoring plan.
<b>Findings</b>	There is no CAR/CL raised in this section.
<b>Conclusion</b>	<p>Emission reductions in this monitoring period are:</p> <p>Total Baseline Emissions: 149,351 tCO<sub>2e</sub></p> <p>Total Project Emission: 68,716 tCO<sub>2e</sub></p> <p>Total Leakage: 6,626 tCO<sub>2e</sub></p> <p>Total Emission Reduction: Emission reduction calculation is done based on following formula,</p> <p>Emission reduction (<math>ER_y</math>) = Baseline Emission (<math>BE_y</math>) – Project Emission (<math>PE_y</math>) – Leakage Emission (<math>LE_y</math>)</p> $= 149,351 \text{ tCO}_2 - 68,716 \text{ tCO}_2 - 6,626 \text{ tCO}_2$ $= 74,009 \text{ tCO}_{2e}$

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

<b>Means of verification</b>	The verification team has determined the emission reductions achieved during this monitoring period with the estimated value and reason for increase if any.
<b>Findings</b>	There is no CAR/CL raised in this section.
<b>Conclusion</b>	The actual CER is 92.38% less than the estimated value. This difference has occurred due to less availability of NG gas during monitoring period and hence the project activity couldn't generate the estimated power. Therefore, less amount of power has been exported to the grid, which resulted in lower number of emission reductions from project activity. Hence, it is acceptable to verification team.

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

<b>Means of verification</b>	The verification team has determined the emission reductions achieved during this monitoring period with the estimated value and reason for increase if any.
<b>Findings</b>	There is no CAR/CL raised in this section.

<b>Conclusion</b>	The actual CER is 92.38% less than the estimated value. This difference has occurred due to less availability of NG gas during monitoring period and hence the project activity couldn't generate the estimated power. Therefore, less amount of power has been exported to the grid, which resulted in lower number of emission reductions from project activity. Hence accepted by verification team.
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#### **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**

<b>Means of verification</b>	The verification team has determined the CER achieved during first commitment period and second commitment period
<b>Findings</b>	There is no CAR/CL raised in this section.
<b>Conclusion</b>	1.GHG emission reductions or net GHG removals by sinks reported up to 31 December 2012: 0 tCO <sub>2</sub> e 2.GHG emission reductions or net GHG removals by sinks reported from 1 January 2013 onwards: 74,009 tCO <sub>2</sub> e

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

<b>Means of verification</b>	Not applicable for the present monitoring period
<b>Findings</b>	Not applicable for the present monitoring period
<b>Conclusion</b>	Not applicable for the present monitoring period

#### **E.10. Global stakeholder consultation**

<b>Means of verification</b>	Not applicable for the present monitoring period
<b>Findings</b>	Not applicable for the present monitoring period
<b>Conclusion</b>	Not applicable for the present monitoring period

### **SECTION F. Internal quality control**

As a final step for verification, the final documentation, including the verification report, has to undergo an internal quality control by the Technical Reviewer(s) to be approved.

Details of the Technical Reviewer(s) are provided within the verification report in Section B.2. and Appendix 2 for further references of knowledge and capability to conduct the quality checking.

After the Technical Review process, the final documentation may undergo a final quality checking process called Administrative Review, done by the Applus+ Certification's Project Manager and/or Technical Support. For final approval, the final set of documents are prepared by the DOE's Technical Manager or its deputy and signed by the authorized signatory of the DOE.

In case any of the persons performing this final internal quality control approval process has acted as a part of the Assessment Team or Technical Review team, the approval can only be given by DOE's authorized personnel who are not part of those teams.

If the final set of documents has been satisfactorily approved, a Request for Issuance is submitted to the UNFCCC CDM EB along with the relevant documents.

### **SECTION G. Verification opinion**

Applus+ Certification has been engaged by M/s Lanco Kondapalli Power Private Limited to perform the 3<sup>rd</sup> periodical verification of the "Grid connected electricity generation using natural gas by Lanco Kondapalli Power Private Limited (UNFCCC Ref. No. 5554)".

The management of M/s Lanco Kondapalli Power Private 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 registered PDD version 04 dated 02/01/2012 and the applied methodology AM0029 ver. 3 - Baseline Methodology for Grid Connected Electricity Generation Plants using Natural Gas

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 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 registered monitoring plan;
- the installed equipment being essential for generating emission reduction runs reliably, however, delay in calibration observed which is addressed in line with para 366 (a) of CDM validation and verification standard for project activities, version 02.0;
- 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 “Grid connected electricity generation using natural gas by Lanco Kondapalli Power Private Limited” for the monitoring period 01/11/2015 to 31/12/2016 (inclusive of both the dates); as reported in Monitoring Report, prepared based on 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 01/11/2015 to 31/12/2016  
(inclusive of both the dates)

Verified emissions in the above reporting period:

Leakage emissions	6,626 tCO <sub>2</sub> equivalents
Project emissions	68,716 tCO <sub>2</sub> equivalents
Baseline emissions	149,351 tCO <sub>2</sub> equivalents
Emission reductions	74,009 tCO <sub>2</sub> equivalents

## **SECTION H.      Certification statement**

Same as above

## Appendix 1. Abbreviations

Abbreviations	Full texts
BM	Build Margin
CAR	Corrective Action Request
CCPP	Combined Cycle Power Plant
CDM	Clean Development Mechanism
CER	Certified Emission Reduction(s)
CEA	Central Electricity Authority
CL	Clarification Request
CM	Combined Margin
CO <sub>2</sub>	Carbon Dioxide
CO <sub>2e</sub>	Carbon Dioxide Equivalent
DNA	Designated National Authority
DOE	Designated Operational Entity
DPR	Detailed Project Report
DR	Document Review
EF	Emission Factor
ER	Emission Reductions Sheet
FAR	Forward Action Request
JMR	Joint Meter Reading
OEM	Original Equipment Manufacturer
GHG	Greenhouse Gas(es)
GWP	Global Warming Potential
PDD	Project Design Document
PP	Project Participant
PPA	Power Purchase Agreement
RGTIL	Reliance Gas Transportation Infrastructure Ltd.

## Appendix 2. Competence of team members and technical reviewers

1. **Pankaj Kumar** worked as team leader – Bihar for South Asia Climate Proofing and Growth Development (CPGD) – Climate Change Innovation Programme (CCIP) supported by DFID that seeks to mainstream climate change resilience into planning and budgeting at the national and sub-national level in India, Pakistan, Nepal, and Afghanistan. Pankaj Kumar has worked previously with IL&FS Infrastructure Development Corporation and BUIDCO (Bihar Urban Infrastructure Development Corporation), Govt. Of Bihar as Environmental Specialist for WB & ADB funded projects. Prior to this, he worked with Carbon Check (UNFCCC accredited DoE), Johannesburg, RSA as Team Leader for validation, verification of around 100 GHG projects in Asia, Africa, USA, Asia Pacific & Americas. Pankaj is accredited Lead Auditor, Validator, Verifier and Technical Expert for Sectoral Scope/Technical Area – 1.1, 1.2, 3.1 & 13.1 by UNFCCC DoE (Designated Operational Entity), APPLUS, Spain. He is also member of task force on climate change & human health, Health Department, GoB and on roster of UNICEF's WASH experts. He is an experienced, qualified and result oriented Environment Professional having more than 14 yrs. Of relevant experience in Climate Change (Mitigation & Adaptation), Environmental Due Diligence, Disaster Risk Reduction, Validation and Verification of GHG project under CDM, Verified Carbon Standard, Gold Standard & Social Carbon Standard, Brazil. He provides technical support for environmental investigative, consultative and remedial projects involving air, water and soil, Waste management, EIA, Environmental Compliance, ISO 14001, OHSAS 18001, GHG accounting (ISO 14064) and Carbon foot printing. Pankaj Kumar is Masters in Environment Management from Forest Research Institute (University), I.C.F.R.E, Dehradun, which is Centre of Excellence in South East Asia for Forestry education & research and PGDEL from National Law School of India University, Bangalore (India).
  
2. **Mr. Simon Shen** (Master Degree in Thermal Energy Engineering, Bachelor Degree in Environmental Engineering) is a Lead Auditor appointed by Applus+ LGAI for the GHG project assessment. He is based in Shanghai. He has several years of work experience in environmental protection field. Before he joined Applus+ LGAI, he had been worked for TÜV SÜD as a GHG Validator/Assessment team and ISO 9001/14001 Lead Auditor for 5 years

### Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1.	NA	Commissioning certificates	Commissioning Certificates of the natural gas fired grid-connected Combined Cycle Power Plant Power Project	Project participant
2.	NA	Contract of the project participant with the DOE	Contract document signed between PP and DOE	Project participant
3.	NA	CDM Project standard- version 02.0	CDM validation and verification standard for project activities, Version 02.0	UNFCCC
4.	NA	Joint Meter Reading (JMR)	Joint Meter Reading (JMR) for the complete monitoring period issued by State Utility	Project participant
5.	NA	Invoices	Invoices for the complete monitoring period raised by PP towards State Utility	Project participant
6.	NA	MR version 01	MR version 1 dated 29/01/2021	Project participant
		MR version 02	MR version 2 dated 12/05/2021	
7.	NA	ER sheet version 02	ER version 02 dated 06/06/2021	Project participant
8.	NA	Actual geo-coordinates	Actual coordinates for the project activity via GPS meters	Project participant
9.	NA	Break Down details of plant	Log book records onsite	Project participant
10.	NA	Application of materiality	Guidelines for Application of materiality in verifications version 2.0	UNFCCC
11.	NA	Registered documents of the project activity	Registered PDD version 04 dated 02/01/2012	UNFCCC website
12.	NA	Approved methodology	AM0029 ver. 3 - Baseline Methodology for Grid Connected Electricity Generation Plants using Natural Gas	UNFCCC
13.	NA	Calibration certificates	Calibration certificates of all meter associated with current monitoring period (issued by Yadav Measurements Pvt. Ltd.)	PP
14.	NA	PPA	Copy of Power Purchase Agreement (PPA) between State Utility and project proponent	PP
15.	NA	Training record	Training records of the O&M personnel	PP

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

Table 1 Remaining FAR from validation and/or previous verifications

<b>FAR ID</b>	xx	<b>Section no.</b>	E.2	<b>Date:</b> DD/MM/YYYY
<b>Description of FAR</b>				
<i>No FAR is remaining from validation or previous verifications.</i>				
<b>Project participant response</b>				<b>Date:</b> DD/MM/YYYY
<b>Documentation provided by project participant</b>				
<b>DOE assessment</b>				
<b>Date:</b> DD/MM/YYYY				

Table 2 CL from this verification

<b>CL ID</b>		<b>Section no.</b>		<b>Date:</b> DD/MM/YYYY
<b>Description of CL</b>				
-				
<b>Project participant response</b>				<b>Date:</b> DD/MM/YYYY
-				
<b>Documentation provided by project participant</b>				
<b>DOE assessment</b>				
<b>Date:</b> DD/MM/YYYY				

Table 3 CAR from this verification

<b>CAR ID</b>	01	<b>Section no.</b>	B.1	<b>Date :</b> 11/04/2021
<b>Description of CAR</b>				
<ol style="list-style-type: none"> <li>1. PP is requested to submit the MR in latest CDM-MR-FORM template, ver. 8.0</li> <li>2. Language of the MR is in future tense throughout the MR including monitoring section. PP shall note that project is commissioned already and undergoing verification, hence language need to be reframed accordingly</li> <li>3. PP shall provide commissioning certificates for review.</li> </ol>				
<b>Project participant response</b>				<b>Date :</b> 12/05/2021
<ol style="list-style-type: none"> <li>1. MR has been prepared in latest CDM-MR-FORM template ver 8.0</li> <li>2. Language of MR has been revised as per comment given by DOE</li> <li>3. Commissioning certificate has been provided</li> </ol>				
<b>Documentation provided by project participant</b>				
<ol style="list-style-type: none"> <li>1. CDM MR v02</li> <li>2. Commissioning certificate</li> </ol>				
<b>DOE assessment</b>				<b>Date:</b> 20/06/2021
<ol style="list-style-type: none"> <li>1. PP has now submitted the MR version 02 dated 12/05/2021 in latest CDM-MR-FORM template, ver. 8.0. Hence, <b>comment closed</b>.</li> <li>2. PP has revised the language in revised MR versión 02 dated 12/05/2021. Hence, comment closed.</li> <li>3. PP has provided the copy of commissioning certificates which are checked by VVB and found appropriate. Hence, <b>comment closed</b>.</li> </ol>				

<b>CAR ID</b>	02	<b>Section no.</b>	C	<b>Date :</b> 11/04/2021
<b>Description of CAR</b>				



During the site visit and subsequent document review, it was observed that the JMR readings (Electricity)/ Joint Tickets (Gas flow and NCV)/fortnight NCV from PP's end for cross-check and the invoice (RGTEL/Electricity) for the complete monitoring period are missing. The emission reduction calculation is thus reserved till the submission of supporting documents and ER sheet.	
<b>Project participant response</b>	<b>Date : 12/05/2021</b>
<ol style="list-style-type: none"> <li>1. JMRs for electricity generation have been provided</li> <li>2. Joint Gas Tickets have been provided</li> </ol>	
<b>Documentation provided by project participant</b>	
<ol style="list-style-type: none"> <li>1. JMRs for entire monitoring period</li> <li>2. Joint Gas Tickets from RGTEL</li> </ol>	
<b>DOE assessment</b>	<b>Date: 20/06/2021</b>
PP has now provided copy of JMRs and Joint Gas Tickets from RGTEL for entire monitoring period which are checked by VVB and confirms that the ER value is conservative and correct. Hence, <b>comment closed</b> .	

<b>CAR ID</b>	03	<b>Section no.</b>	E.1	<b>Date : 11/04/2021</b>
<b>Description of CAR</b>				
Emission reduction calculation sheet for baseline, project and leakage emission is missing. The claimed ER is thus reserved till the supporting documents are submitted and ER sheet is provided. Moreover, corrective action is sought in section E.1, E.2 and E.3 of the MR.				
<b>Project participant response</b>				<b>Date : 12/05/2021</b>
Emission reduction sheet has been provided. Section E.1, E.2 and E.3 of MR has been revised				
<b>Documentation provided by project participant</b>				
Ex post ER calculation sheet				
<b>DOE assessment</b>				<b>Date: 20/06/2021</b>
PP has now submitted ER sheet for this monitoring period with details of baseline, project and leakage emission and revised section E.1, E.2 and E.3. Values checked and found to be consistent with revised MR, ver. 2.0 dated 12/05/2021. Hence, <b>comment closed</b> .				

<b>CAR ID</b>	04	<b>Section no.</b>	E.1	<b>Date : 11/04/2021</b>
<b>Description of CAR</b>				
During the document verification and subsequent site visit, it was observed that the calibration reports for all the monitoring parameters are missing for the present verifications. Emission reduction calculation is thus reserved till the calibration reports are submitted. Corrective action is sought for the same.				
<b>Project participant response</b>				<b>Date : 12/05/2021</b>
Calibration reports of energy meters and gas Flow meters have been provided to the verification team covering the monitoring period				
<b>Documentation provided by project participant</b>				
<ol style="list-style-type: none"> <li>1. Calibration reports of energy meters</li> <li>2. Calibration reports of Flow meters</li> </ol>				
<b>DOE assessment</b>				<b>Date: 20/06/2021</b>
PP has now submitted calibration reports for all the monitoring parameters pertaining to current monitoring period. Verification team checked calibration certificates issued by Yadav Measurements Pvt. Ltd., and the same is acceptable to the assessment team. Hence, <b>comment closed</b> .				

<b>CAR ID</b>	05	<b>Section no.</b>	E.1	<b>Date : 11/04/2021</b>
<b>Description of CAR</b>				
The breakdown details of the power plant are missing in the MR. Moreover, the supporting document regarding the breakdown (scheduled/forced) details are also not provided to the assessment team. Corrective action is sought in the respective section of the MR and supporting documents for further analysis.				
<b>Project participant response</b>				<b>Date : 12/05/2021</b>
Breakdown details provided in section B.1 of MR				
<b>Documentation provided by project participant</b>				
CDM MR v02				
<b>DOE assessment</b>				<b>Date: 20/06/2021</b>
PP has provided breakdown details in section B.1 of revised MR Ver. 02 dated 12/05/2021, which are found appropriate by verification team. Hence, <b>comment closed</b> .				

Table 4 FAR from this verification

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

### Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
04.0	6 April 2021	Revision to: <ul style="list-style-type: none"> <li>• Reflect the “Clarification: Regulatory requirements under temporary measures for post-2020 cases” (CDM-EB109-A01-CLAR).</li> </ul>
03.0	31 May 2019	Revision to: <ul style="list-style-type: none"> <li>• Ensure consistency with version 02.0 of the “CDM validation and verification standard for project activities” (CDM-EB93-A05-STAN);</li> <li>• Make structural and editorial improvements.</li> </ul>
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.
Decision Class: Regulatory Document Type: Form Business Function: Issuance Keywords: project activities, verifying and certifying		