

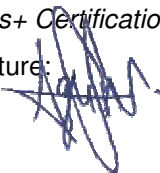


**Verification and certification report form for
CDM project activities
(Version 04.0)**

Complete this form in accordance with the instructions attached at the end of this form.

BASIC INFORMATION

Title and UNFCCC reference number of the project activity	5 MW Solar PV Power Plant CDM Project by OPG Energy Private Ltd.,- Baap, Jodhpur, Rajasthan, India (UNFCCC Ref. No. 10125)		
Scale of the project activity	<input type="checkbox"/> Large-scale <input checked="" type="checkbox"/> Small-scale		
Version number of the verification and certification report	01		
Completion date of the verification and certification report	17/05/2021		
Monitoring period number and duration of this monitoring period	01 (01/01/2016 to 31/12/2020; both days included)		
Version number of the monitoring report to which this report applies	03		
Crediting period of the project activity corresponding to this monitoring period	01/01/2016 to 31/12/2022		
Project participants	M/s OPG Energy Private Ltd.		
Host Party	India		
Applied methodologies and standardized baselines	AMS-I.D "Grid connected renewable electricity generation" (Version 17) Standardized Methodology: Not Applicable		
Mandatory sectoral scopes	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 registered PDD	39,113 tCO ₂ e		
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
	0 tCO ₂ e	40,813 tCO ₂ e	0 tCO ₂ e
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	<p>Mr. Agustín Calle de Miguel</p> <p><i>Applus+ Certification CDM Technical Manager</i></p> <p>Signature: </p>
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SECTION A. Executive summary

M/s OPG Energy Private Ltd. has commissioned LGAI Technological Center, S.A. (Applus+ Certification) to perform a verification of the “5 MW Solar PV Power Plant CDM Project by OPG Energy Private Ltd., - Baap, Jodhpur, Rajasthan, India”. The project activity located at Baap Village (also called “Bap”) of Jodhpur district in Rajasthan State of India.

The project activity uses solar photovoltaic modules to generate electrical energy. The total installed capacity of the project activity is 5 MWp. During this monitoring period 42,602 MWh of electricity displaced from NEWNE grid (now INDIAN grid), which otherwise been produced through fossil fuels-based power plant, connected to the grid. The project activity is a green field project activity & generates electricity using wind energy.

Assessment team also observed that there is no change in design/technical parameter as mentioned in the registered PDD and thus the same is found correct. No design change observed for the current monitoring period and the rated capacity as mentioned in the registered PDD is implemented onsite and thus the same is acceptable and correct for the current monitoring period. No PRC change is thus envisaged for the current monitoring period.

During the monitoring period 01/01/2016 to 31/12/2020; (inclusive of both days) the project activity has achieved emission reductions 40,813 tCO₂e.

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”, 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:

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

In the 1st stage, Applus+ Certification completed a strategic review and risk assessment of the project's 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 which, 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 2nd 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 a desk review of the Monitoring Report. This Verification Report describes the findings of this assessment.

The Monitoring Report version 01 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. Sukanta Das	LA/TE	YES	YES	NA
Mr. Jitendra Mohan Singh	A/TE	YES	YES	NA
Mr. Simon Shen	TR	YES	YES	NA

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

5. Review of Documentation:

The Monitoring Report version 01 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 on-site inspection has been performed by the assessment team. 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 cross-checks have been done in cases that further sources were available. The monitoring report's figures were checked by the assessment team against the raw data. 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 for Verification assessment, the final documentation, including the Verification Report, has to undergo an internal quality control by the Technical Reviewer(s) to be approved.

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 of issuance is submitted to the UNFCCC CDM EB along with the relevant 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	Das	Sukanta	True Quality Certifications Private Limited- Outsourced entity	Yes	Yes	Yes	Yes
2.	Auditor/Technical Expert	OR	Singh	Jitendra Mohan	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	Xue	Denny	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 personal are well trained to monitor and collect data and thus risk associated with Human error is minimized. Assessment team checked the training records to confirm that all the personal 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 personal 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,	All the JMR (Monthly meter report/Generation Report) sheets and the invoices/Obligation Reports for the

			changes/updates, version tracking, traceability and security	complete monitoring period are checked and thus the assessment team confirms that the ER value is conservative and correct.
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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 spread sheet. 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 to include 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 01 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 03. 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: 23/04/2021				
No.	Activity performed on-site	Site location	Date	Team member
1.	<p>The verification team conducted visit to the project site to confirm the information and to resolve issues identified in the document review. An on-site assessment was conducted as a part of verification activity and involved:</p> <p>1) an assessment of the implementation and operation of the CDM project activity as per the registered PDD</p> <p>2) a review of information flows for generating, aggregating and reporting of the monitoring parameters</p> <p>3) interviews with relevant personnel to confirm that the operational and data collection procedures are implemented in accordance with the Monitoring Plan</p> <p>4) a cross-check between information provided in the MR and data from other sources</p> <p>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</p> <p>6) a review of calculations and assumptions made in determining the GHG data and ERs, and</p> <p>7) an identification of QA/QC procedures in place to prevent, or identify and correct, any errors or omissions in the reported monitoring parameters</p>	Jodhpur, Rajasthan	23/04/2021	<p>Mr. Sukanta Das</p> <p>Mr. Jitendra Mohan Singh</p>

D.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Rao	Mr. J	Director	23/04/2021	As mentioned above in section D.2 of this report	<p>Sukanta Das</p> <p>Jitendra Mohan Singh</p>
2.	Purohit	Mr. Ganesh	Site In-charge	23/04/2021	As mentioned above in section D.2 of this report	<p>Sukanta Das</p> <p>Jitendra Mohan Singh</p>
2.	Ghose	Bisbushita	EKI Energy Services Pvt. Ltd.	23/04/2021	As mentioned above in section D.2 of this report	<p>Sukanta Das</p> <p>Jitendra Mohan Singh</p>

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	01	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	01	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	01	00
Assessment of reported sustainable development co-benefits	00	00	00
Global stakeholder consultation	00	00	00
Others (please specify)	00	00	00
Total	00	05	00

SECTION E. Verification findings

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

Means of verification	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 follow the guidelines provided in the template
Findings	CAR 01 was raised during the verification process. Please refer Appendix 4 of this report for the complete closure of the CAR.
Conclusion	The MR was web hosted in version 07.0 of the MR form which is the current and active version in the UN platform at the time of web hosting. However, PP has updated MR in the new version of MR template i.e. version 8.0. The monitoring report has been prepared as per the instructions provided in the template. DOE has made the version 01 of the monitoring report covering the monitoring period 01/01/2016 to 31/12/2020 (both the days included), publicly available through its dedicated interface on the UNFCCC CDM website on 30/03/2021 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. However, CAR 01 was raised for the use of new version i.e. version 8.0 of monitoring form. CAR was closed on revision of the monitoring report in version 8 of monitoring report form for this CAR.

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

This is 1st periodic verification for crediting period of the project activity. NO FAR was raised during the validation of the project activity. Same is verified from validation report.

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

Means of verification	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.
Findings	CAR 02 was raised during the verification process and closed successfully. Please refer Appendix 4 of this report for the detail closure of the CAR.

Conclusion	<p>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. The project activity was commissioned on 13/10/2011. All the equipment installed are in continuous operation. Same is confirmed during site visit and evident from JMRs. Scheduled & preventive maintenance is carried out as per manufacturer specification for the power plant. No unforeseen activity observed during the present verification which 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. The solar plant is connected to 132 kV sub-station at Bap (Jodhpur) as a single feeder and the same is evident from the JMR sheets. The same is checked during the verification site visit.</p> <p>Assessment team checked the latitude and longitude of the project activity during the onsite visit with the help of mobile GPS. Moreover, assessment team also checked the same with Google earth software and found that the detail of latitude and longitude as mentioned in the registered PDD is correct.</p> <p>The project activity is located at Bap Village in Jodhpur district of Rajasthan State, India. The Geo coordinates is given below:</p> <p>Latitude: 27° 21' 20.61" N Longitude: 72° 21' 04.71" E</p> <p>The assessment team checks the above details during the verification site visit & review of commissioning certificates. Same are found in-line with registered PDD. The detail also forms the part of monitoring report and thus acceptable to the assessment team.</p> <p>Assessment team checked the technical specification and details of the solar plant during the onsite visit. The details are checked from the manufacturer technical specification as well from the physical visit. The technical life time of the project activity is 25 years. The detail as mentioned in the registered PDD is correct and the same is mentioned in the MR version 02.</p> <p>The technical specifications of the solar modules are as follows:</p> <table border="1"> <tr> <td colspan="2">Topray Solar (40 W)</td></tr> <tr> <td>Maximum Power Pmax (W)</td><td>40</td></tr> <tr> <td>Open circuit voltage-Voc (V)</td><td>61</td></tr> <tr> <td>Short Circuit Current Isc</td><td>1</td></tr> <tr> <td>Maximum Power Voltage-Vpm</td><td>46</td></tr> <tr> <td>Maximum Power Current-Ipm (A)</td><td>0.87</td></tr> <tr> <td>Power Tolerance</td><td>+/-3%</td></tr> <tr> <td>Cell Type</td><td>Amorphous Silicon Solar Cell</td></tr> <tr> <td colspan="2">Abound Solar (62.5 W)</td></tr> <tr> <td>Model number</td><td>AB1-62</td></tr> <tr> <td>Nominal Power PMPP (w)</td><td>62.5</td></tr> <tr> <td>Voltage at nominal power VMPP (V)</td><td>34.3</td></tr> <tr> <td>Current at nominal power IMPP (A)</td><td>1.83</td></tr> <tr> <td>Short circuit current Isc (A)</td><td>2.24</td></tr> <tr> <td>Open circuit voltage Voc (V)</td><td>45.7</td></tr> <tr> <td>Cell Type</td><td>Calcium Telluride (CdTe)</td></tr> <tr> <td colspan="2">Abound Solar (72.5 W)</td></tr> <tr> <td>Model number</td><td>AB1-72</td></tr> <tr> <td>Nominal Power PMPP (w)</td><td>72.5</td></tr> <tr> <td>Voltage at nominal power VMPP (V)</td><td>34.3</td></tr> <tr> <td>Current at nominal power IMPP (A)</td><td>2.10</td></tr> <tr> <td>Short circuit current Isc (A)</td><td>2.48</td></tr> </table>	Topray Solar (40 W)		Maximum Power Pmax (W)	40	Open circuit voltage-Voc (V)	61	Short Circuit Current Isc	1	Maximum Power Voltage-Vpm	46	Maximum Power Current-Ipm (A)	0.87	Power Tolerance	+/-3%	Cell Type	Amorphous Silicon Solar Cell	Abound Solar (62.5 W)		Model number	AB1-62	Nominal Power PMPP (w)	62.5	Voltage at nominal power VMPP (V)	34.3	Current at nominal power IMPP (A)	1.83	Short circuit current Isc (A)	2.24	Open circuit voltage Voc (V)	45.7	Cell Type	Calcium Telluride (CdTe)	Abound Solar (72.5 W)		Model number	AB1-72	Nominal Power PMPP (w)	72.5	Voltage at nominal power VMPP (V)	34.3	Current at nominal power IMPP (A)	2.10	Short circuit current Isc (A)	2.48
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	Open circuit voltage Voc (V)	46.40
	Cell Type	Calcium Telluride (CdTe)
	Topray (240 W)	
	Maximum Power Pmax (W)	176
	Open circuit voltage-Voc (V)	34.10
	Short Circuit Current Isc	7.24 A
	Maximum Power Voltage-Vpm	26.40V
	Maximum Power Current-Ipm (A)	6.65 A
	Power Tolerance	+/-3%
	Cell Type	Monocrystalline
	Technical specifications of the transformers as follows:	
	Rated capacity, kVA (Continuous)	1250
	Type of Cooling	ONAN
	Short circuit level (HV) and duration	31.5 kArms 1 secs
Rated voltage / highest voltage		
HV	36	
LV	0.270+10% (insulated for 3.6 kV rms)	
Rated frequency, Hz	50 Hz \pm 5%	
<p>Verification team confirms that technical specification of solar plant is same as mentioned in registered CDM PDD.</p> <p>No events or situations happened during the reported monitoring period that can alter the applicability of the applied methodology.</p> <p>The metering arrangement of the energy meter is provided in the revised MR. The flow diagram is in conjugation with the onsite practice and thus acceptable to the DOE.</p> <p>Based on the documentary evidence of commissioning certificates and physical verification DOE concludes that the project was implemented as per the registered PDD.</p>		

E.4. Post-registration changes

E.4.1. Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents¹

Not applicable for present Monitoring period. PP has not applied any type of deviation.

E.4.2. Corrections

Not applicable for present Monitoring period. No correction has been made

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

The start date of the crediting period of the project activity is changed from 01/01/2015 to 01/01/2016 (01/01/2016 – 31/12/2022). The same is verified by assessment team from UNFCCC project's webpage².

E.4.4. Inclusion of a monitoring plan

Not applicable for present Monitoring period.

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).

² <https://cdm.unfccc.int/Projects/DB/RINA1424680430.15/view>

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

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 being renewable energy project

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

Means of verification	The verification team determined whether the registered monitoring plan is in accordance with the applied methodology AMS-I. D Grid Connected Renewable Electricity Generation (Version 17) including applicable tools.
Findings	There is no CAR/CL raised in this section.
Conclusion	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. AMS-I. D Grid Connected Renewable Electricity Generation (Version 17) 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

Means of verification	The assessment team checked the registered PDD to confirm the ex-ante fixed parameter mentioned in the current monitoring report. Assessment team also interviewed the personal onsite to check further regarding the ex-ante values used for emission reduction calculation.
Findings	There is no CAR/CL raised in this Section.
Conclusion	<p>EF_{OM,y}; EF_{BM,y} & EF_y are considered as ex-ante fixed parameters. 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>The value for EF_{OM,y} and EF_{BM,y} were considered from the CO₂ baseline database (Version 8.0) published by Central Electricity Authority (CEA). The default value as mentioned in the registered PDD and MR are same. The CO₂ emission factor of the NEWNE grid 'EF_y' is calculated as per Tool to calculate the emission factor for an electricity system. 75% of OM and 25% of BM are used for calculation of CM of the grid and thus assessment team concludes that the value is correct and appropriate. The default value in turn is used for baseline calculation as per the formula given in the registered PDD for the current monitoring period. The values used for emission reduction calculation for the present verification is as below:</p> <p>EF_{grid,OM,y} = 0.972 tCO₂e/MWh (As per the registered PDD version 01.2 and CO₂ Baseline Database Version 08 for the Indian Power Sector prepared by Central Electricity Authority)</p> <p>EF_{grid,BM,y} = 0.916 tCO₂e/MWh (As per the registered PDD version 01.2 and CO₂ Baseline Database Version 08 for the Indian Power Sector prepared by Central Electricity Authority)</p> <p>EF_y = 0.958 tCO₂e/MWh (As per the registered PDD version 01.2). The values are same as per the registered PDD as confirmed by the verification team during the desk review of registered CDM PDD dated 10/02/2015 version 01.2)</p>

E.6.2. Data and parameters monitored

Means of verification	The assessment team checked the registered PDD to confirm the ex-post parameter mentioned in the current monitoring report. Assessment team also interviewed the personal onsite to check further regarding the ex-post parameter monitoring and confirms that the same is in line with the registered PDD. AMS-I.D Grid Connected Renewable Electricity Generation (Version 17) 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.																			
Findings	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.																			
Conclusion	<p>As per the registered monitoring plan and requirement of the registered methodology following parameters needs to be monitored:</p> <p>EG_{BL,y,export}: Quantity of electricity export to the grid during the year y(MWh) The electricity exported to grid is continuous measured by main and check meter at the switchyard by a two-way main and check electronic meter of accuracy class 0.2s. Export readings of Main meter is taken on monthly by authorized officer of Jodhpur DISCOM in the presence of PP representative and signed by them. The details of meters are follows:</p> <table><tr><th>Meter Type</th><th>Meter ID</th><th>Accuracy class</th><th>Make</th><th>Calibration frequency</th></tr><tr><td>Main Meter</td><td>ASH05816</td><td rowspan="4">0.2s</td><td>Secure</td><td rowspan="4">At least once in 3 year</td></tr><tr><td>Check Meter</td><td>ASH05817</td><td>Secure</td></tr><tr><td>Main Meter</td><td>RJB74568</td><td>Secure</td></tr><tr><td>Check Meter</td><td>RJB74569</td><td>Secure</td></tr></table> <p>The Main Meter No. ASH05816 and Check Meter No. ASH05817 were replaced by Main Meter No. RJB74568 and Check Meter No. RJB74569 respectively on 01/12/2020. The same is checked verification team with the meter change report issued by DISCOM.</p> <p>Verification team checked the quantity of electricity export to the grid from the JMR statement and found correct. Verification team confirms that during the this monitoring period 43,154.3 MWh of electricity exported to grid by the project activity.</p> <p>EG_{BL,y,import} Quantity of electricity import from the grid during the year y The quantity of electricity imported from grid is continuously measured continuously using above mentioned Main & Check meters at the switchyard. Import readings of Main meter is taken on monthly basis by authorized officer of Jodhpur DISCOM in the presence of PP representative jointly and signed by the representatives of the Jodhpur DISCOM and PP representative. The quantity of electricity import from the grid during this monitoring period is 551.6 MWh.</p> <p>EG_{BL,y}: Net quantity of electricity export to the grid during the year y. EG_{BL,y} is calculated based on the measured values of “export” and “import” data (EG_{BL,y}= EG_{BL,y,export} – EG_{BL,y,import}) sourced from the monthly generation reports/JMRs issued by DISCOM. The export and import energy are measured continuously using above mentioned Main & Check meters at the switchyard. The net electricity imported by the project activity from grid during current monitoring period is 42,602 MWh. The same is verified with the monthly generation reports (JMRs) and cross checked with the monthly invoices raised by PP.</p> <p>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 version 01.2. Assessment team checked the value of net electricity exported calculated from export and import values and found the same to be correct. The Net electricity supplied to the grid is also checked from the JMR statement and found correct. Moreover, the Net electricity exported is also cross checked from the invoices raised as per the requirement of the methodology and registered PDD and it is confirmed that the</p>	Meter Type	Meter ID	Accuracy class	Make	Calibration frequency	Main Meter	ASH05816	0.2s	Secure	At least once in 3 year	Check Meter	ASH05817	Secure	Main Meter	RJB74568	Secure	Check Meter	RJB74569	Secure
Meter Type	Meter ID	Accuracy class	Make	Calibration frequency																
Main Meter	ASH05816	0.2s	Secure	At least once in 3 year																
Check Meter	ASH05817		Secure																	
Main Meter	RJB74568		Secure																	
Check Meter	RJB74569		Secure																	

	<p>values are correct. Assessment team thus confirm that the value of 42,602 MWh as mentioned in the MR version 02 and emission sheet is correct and the same is in compliance with the requirement of Para 364 and 395(e).</p> <p>The MR describes the monitoring system, monitoring procedures, data collection and reporting, responsibilities of relevant staff/departments, emergency procedures, calibrations that were implemented and QA/QC procedures. The verification team confirmed the data collection mechanism described in the Monitoring period during the site visit. The data is archived and is maintained for the entire crediting period plus 2 years. The Monitored Data is to be kept for a minimum of two years after the end of the crediting period and archived both electronically and in paper mode. It was confirmed that the QA/QC procedures implemented at the site are consistent with the registered PDD. The Verification team identified that the correct emission factor is reported under the section D.2 of the monitoring report to apply the appropriately report the emission factor. Based on above assessment the verification team confirms that requisite parameter is monitored in line with registered monitoring plan.</p>
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E.6.3. Implementation of sampling plan

Means of verification	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.
Findings	There is no CAR/CL raised in this section.
Conclusion	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 (Monthly Meter Readings)/ obligation schedules and injection schedule reports, 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

Means of verification	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				
Findings	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.				
Conclusion	The metering arrangement is tri-vector bi-directional (ABT) SEMsP100 make and 0.2s accuracy class energy meters at the project site. These meters record several parameters including electricity exported & imported. State utility officials to obtain the value of export and import are using these electricity meters and hence net electricity supplied is calculated based on export, import values.				
	The details of the Calibration are as follows:				
	Meter Type	Meter ID	Date of Calibration	Validity of calibration	Compliance of calibration frequency
	Main Meter	ASH05816	27/10/2015	26/10/2018	Yes.
			20/11/2017	19/11/2020	Yes
			02/12/2019	01/12/2022	Yes
	Check Meter	ASH05817	27/10/2015	26/10/2018	Yes
			20/11/2017,	19/11/2020	Yes
			02/12/2019	01/12/2020	Yes
	Main Meter	RJB74568	01/12/2020	30/11/2023	Yes
Check Meter	RJB74569	01/12/2020	30/11/2023	Yes	
The Main Meter Sr. No ASH05816 and Check Meter Sr. No ASH05817 installed at the time of commissioning was replaced with new calibrated Main Meter Sr. No. RJB74568 and Check meter Sr. No. RJB74569 before due date of calibration.					
Verification team confirms that all the energy meters (both main and check meter) installed at the substation are of accuracy class of 0.2s and calibrated at least once in three year as per calibration frequency mentioned in registered PDD. It can be confirmed that meters were under valid calibration for entire monitoring period.					

	Calibration of the energy meters were carried out by third party Ltd accredited Laboratory from National Accreditation Board for Testing and Calibration, Govt. of India (http://www.nabindia.org) to carry out calibration. Assessment team checked the same and found that the calibration is appropriate and correct as traceability of calibration is also confirmed by the verification team.
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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 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.
Findings	CAR 05 was raised during the verification process and closed successfully. Please refer Appendix 4 of this report for the detail closure of the CAR.
Conclusion	<p>The baseline is the MWh produced by the project activity multiplied by an emission coefficient (measured in tonnes CO₂/MWh) calculated in a transparent and conservative manner as the weighted average emissions (in tonnes CO₂/MWh) as described in approved PDD. The baseline emissions for the monitoring period are calculated as follows:</p> $BE_y = EG_{BL,y} \times EF_{CO_2,grid,y}$ <p>Where, BE_y = Baseline emissions in year y (tCO₂e) EG_{BL,y} = Quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in year y (MWh) EF_{CO₂,grid,y} = CO₂ Emission Factor of the grid in year y (tCO₂e/MWh), i.e., 0.958 tCO₂/MWh (it has been fixed ex-ante). Net electricity supplied to the grid by the project activity (EG_{BL,y}), = 42,602 MWh</p> $BE_y = EG_{BL,y} \times EF_{CO_2,grid,y}$ $= 42,600 \times 0.958$ $= 40,813 \text{ tCO}_2\text{e (Rounded down)}$ <p>As per the methodology Consolidated baseline methodology for grid-connected electricity generation from renewable sources (AMS-I. D Version 17), there is no project activity emissions associated with the project activity as this is a Wind power project and hence PE_y = 0 tCO₂. Further, as per the registered PDD no leakage emissions are considered.</p> <p>Thus, emission reductions are calculated as follow: Emission reductions = Baseline emissions – Project emissions – Leakage emission = 40,813 – 0 – 0 = 40,813 tCO₂e</p> <p>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.</p>

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

Means of verification	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.
Findings	CAR 05 was raised during the verification process and closed successfully. Please refer Appendix 4 of this report for the detail closure of the CAR.
Conclusion	The project emissions are regarded as zero according to the applied methodology

	and registered PDD.
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E.8.3. Calculation of leakage GHG emissions

Means of verification	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.
Findings	There is no CAR/CL raised in this section.
Conclusion	The leakage emissions are regarded as zero according to the applied methodology and registered PDD.

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

Means of verification	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.
Findings	CAR 05 was raised during the verification process and closed successfully. Please refer Appendix 4 of this report for the detail closure of the CAR.
Conclusion	<p>Emission reductions in this monitoring period are: Total Baseline Emissions: 40,813 tCO₂e Total Project Emission: 0 tCO₂e Total Leakage: 0 Total Emission Reduction: Emission reduction calculation is done based on following formula,</p> $\text{Emission reduction (ER}_y\text{)} = \text{Baseline Emission (BE}_y\text{)} - \text{Project Emission (PE}_y\text{)} - \text{Leakage (Ly)}$ $= 40,813 \text{ tCO}_2 - 0 \text{ tCO}_2 - 0 \text{ tCO}_2$ $= 40,813 \text{ tCO}_2\text{e (Round down)}$

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

Means of verification	The verification team has determined the emission reductions achieved during this monitoring period with the estimated value and reason for increase if any.
Findings	There is no CAR/CL raised in this section.
Conclusion	The Actual emission reduction for the project activity is 40,813 tCO ₂ e (checked from the final emission reduction sheet). The estimated emission reduction in the registered PDD for 365 days is 7,814 tCO ₂ e. However present monitoring period contains 1827 days. Hence, the value is thus calculated based on pro-rata basis from the estimated value in the registered PDD. The calculation is checked by the verification team in the actual emission reduction sheet and found correct. The estimated value for the present monitoring period is thus 39,113 tCO ₂ e.

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

Means of verification	The verification team has determined the emission reductions achieved during this monitoring period with the estimated value and reason for increase if any.
Findings	CAR 05 was raised during the verification process and closed successfully. Please refer Appendix 4 of this report for the detail closure of the CAR.
Conclusion	The Emission Reduction (ER) value in the monitoring period is 4.35% higher than as compared to the estimated value for the current monitoring period. Such variation has been due to natural phenomena and nature dependent and cannot be controlled by the Project Proponent and power generation from solar PV is dependent on weather. The project activity is auto additional and the increase in actual emission reductions do not have any impact on additionality of project, thus

accepted by verification team.

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 determined the CER achieved during first commitment period and second commitment period
Findings	CAR 05 was raised during the verification process and closed successfully. Please refer Appendix 4 of this report for the detail closure of the CAR.
Conclusion	1.GHG emission reductions or net GHG removals by sinks reported up to 31 December 2012: 0 tCO ₂ e GHG emission reductions or net GHG removals by sinks reported from 1 January 2013 onwards: 40,813 tCO ₂ e (Monitoring period starting from 01/01/2016) GHG emission reductions or net GHG removals by sink reported from 1 January 2021= 0 tCO ₂ e

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

Means of verification	Not applicable for the present monitoring period
Findings	Not applicable for the present monitoring period
Conclusion	Not applicable for the present monitoring period

E.10. Global stakeholder consultation

Means of verification	Not applicable for the present monitoring period
Findings	Not applicable for the present monitoring period
Conclusion	Not applicable for the present monitoring period

SECTION F. Internal quality control

As a final step for Verification assessment, 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 of issuance is submitted to the UNFCCC CDM EB along with the relevant documents.

SECTION G. Verification opinion

LGAI Technological Center, S.A (Applus+ Certification) has been engaged by M/s OPG Energy Private Ltd. to perform the 1st periodical verification of the "5 MW Solar PV Power Plant CDM Project by OPG Energy Private Ltd., - Baap, Jodhpur, Rajasthan, India" (UNFCCC Ref. No. 10125).

The M/s OPG Energy Private Ltd. 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 approved PDD version 01.2 dated:10/02/2015 and the applied methodology AMS-I.D "Grid connected renewable electricity generation" (Version 17)

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;
- 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 “5 MW Solar PV Power Plant CDM Project by OPG Energy Private Ltd., - Baap, Jodhpur, Rajasthan, India” for the monitoring period 01/01/2016 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 01/01/2016 to 31/12/2020;

Verified emissions in the above reporting period:

Leakage emissions	0 tCO ₂ equivalents
Project emissions	0 tCO ₂ equivalents
Baseline emissions	40,813 tCO ₂ equivalents
Emission reductions	40,813 tCO ₂ equivalents

SECTION H. Certification statement

Same as above

Appendix 1. Abbreviations

Abbreviations	Full texts
BM	Build Margin
CAR	Corrective Action Request
CER	Certified Emission Reduction(s)
CEA	Central Electricity Authority
CL	Clarification request
CM	Combined Margin
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
EF	Emission Factor
ER	Emission Reductions sheet
FAR	Forward Action Request
JMR	Joint Meter reading
M.P.P.K.V.V.	Madhya Pradesh Paschim Vidyut Vitran Co.Ltd.
GHG	Greenhouse gas(es)
GWP	Global Warming potential
PP	Project Participant
PPA	Power purchase agreement

Appendix 2. Competence of team members and technical reviewers

1. **Mr. Sukanta DAS**, has done M. SC in (Electronics and Photonics) and M. Tech in (Energy technology) from Tezpur Central University/ Indian Institute of technology Bombay in India. He is a certified lead auditor for ISO 14001 EMS LA and ISO 9001 QMS LA from International registry for Certified Auditors (IRCA) and Certified Lean Management practitioner from Quality Council of India (QCI). He has more than (11) years of working experience at TUV NoRD/ Re-consult/CRA/APPLUS certifications under various categories of projects stating from Renewable to waste to supercritical projects. He was JI/ CDM Lead Assessor in TUV NoRD and was involved in more than 100 CDM validation and verifications activities in Gold Standard, VCS, CDM projects as a team leader/technical reviewer / validator / verifier covering the sectoral scope 1, 13 technical areas 1.2/1.1/13.1. Currently he is associated with True Quality Certifications Private Limited and is empanelled with APPLUS certification to carry out GHG audit.
2. **Mr. Jitendra Mohan Singh**, has done Advanced MSc in Sustainable Energy Systems and Management from International Institute of Management, University of Flensburg, Germany and B.Tech. in Agricultural Engineering from Allahabad University, India. He has more than (18) years of working experience in different organizations like IARI, IIT Delhi, ICAR, IRADe, CAPART, SMEC and Perenia Carbon and M B Power (Madhya Pradesh) Ltd. in the area of Agriculture, Energy & Environment and Climate Change. He also worked on contract basis (adhoc) as a RIT expert in UNFCCC from 2010 to 2013. Currently, he is associated with True Quality Certifications Private Limited and is empanelled with APPLUC certification to carry out validation and verification related to GHG reductions projects.
3. **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 3.5 years.

Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1	NA	Commissioning certificates	Commissioning Certificates of the project activity	Project participant
2	NA	Contract of the project participant with the DOE	Contract document signed between PP and DOE	Project participant
3	NA	CDM VVS	CDM validation and verification standard for project activities, Version 02.0	UNFCCC
4	NA	Joint Meter Reading (JMR)	JMR reports for the project activity covering complete monitoring period	Project participant
5	NA	Invoices/ Obligation Reports	Invoices for the complete monitoring period raised by PP (hard copies verified in presence of PP & not retained by DOE being confidential)	Project participant
6	NA	MR version 01 MR version 02 MR version 03 (Final)	MR version 01 dated 15/03/2021 MR version 02 dated 13/05/2021 MR version 03 dated 14/05/2021	Project participant
7	NA	ER sheet version 01 ER sheet version 02	Version 01 dated 25/03/2021 Version 02 dated 13/5/2021	Project participant
8	NA	Break Down details of plant	Log book records onsite maintained by PP	Project participant
9	NA	Application of materiality	Guidelines for Application of materiality in verifications version 2.0	UNFCCC
10	NA	Registered documents of the project activity	https://cdm.unfccc.int/Projects/DB/RINA1424680430.15/view Registered PDD v.01.2 dated:10/02/2015 Final Validation Report –No. 2013-IQ-MD-07 by RINA, Dated 23/03/2015	UNFCCC website
11	NA	Approved methodology	AMS-I. D “Grid connected renewable electricity generation” (Version 17)	UNFCCC
12	NA	Calibration certificates	Calibration certificates for the Main and Check meters	PP
13	NA	PPA	Copy of Power Purchase Agreement (PPA)	PP
14	NA	Meter change Report	Meter Change Report Issued by DISCOM	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				
<i>This is first periodic verification. No FAR is remaining from validation.</i>				
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	xx	Section no.		Date: DD/MM/YYYY
Description of CL				
NA				
Project participant response				Date: DD/MM/YYYY
Documentation provided by project participant				
DOE assessment				
Date: DD/MM/YYYY				

Table 3. CAR from this verification

CAR ID	01	Section no.	E.1	Date: 24/04/2021
Description of CAR				
<i>Monitoring report form for CDM project activity has been revised to Version 8.0 by the CDM EB. PP requested to update the monitoring report in new version of monitoring report form.</i>				
<i>Corrective action required.</i>				
Project participant response				Date: 07/05/2021
Monitoring Report has been updated on Version 8.0				
Documentation provided by project participant				
Updated Monitoring Report				
DOE assessment				Date: 10/05/2021
PP has now updated the web hosted monitoring report in new version of monitoring report template i.e. version 8.0. Thus, CAR closed .				

CAR ID	02	Section no.	E.3	Date: 24/04/2021
Description of CAR				
<i>During review of documents submitted by PP to DOE, verification team observed that following documents are not submitted to DOE.:</i>				
<ul style="list-style-type: none"> • Commissioning certificate of the project activity • Power Purchase agreement • Log Book/ Break down 				
<i>PP is requested to submit above documents for verification.</i>				
Project participant response				Date: 07/05/2021
Supporting Documents have been submitted to verification team				
Documentation provided by project participant				
Commissioning Certificate, Power Purchase Agreement, Breakdown Details				
DOE assessment				Date: 10/05/2021

1. PP has submitted the copy of commissioning Certificate the project activity issued by Jodhpur DISCOM Verification team checked commissioning certificate and confirms that project activity was commissioned on 13/10/2011. Comment Closed.
2. PP has still not submitted the Power Purchase Agreement to verification team. Comment Open.
3. PP has submitted the break Down/Plant log book to verification team. However, the same is not included in revised MR. Comment Open.
CAR Open
Project participant response Date: 14/05/2021
2. Power Purchase agreement has been submitted.
3. Breakdown details have been provided in MR.
Documentation provided by project participant
Power Purchase Agreement, Revised MR
DOE assessment Date: 17/10/2021
PP has now submitted the Power Purchased Agreement (PPA). Verification team checked the same and confirms that PPA is signed between OPG Energy Private Limited and NTPC Vidyut Vyapar Nigam Limited dated:15/10/2010.
Further, PP has incorporated the break down details in Annexure 1 of revised MR version 03. The shutdown event is cross checked from the plant log down records. It has been observed that the shutdown events has presented in the revised MR version 03 is correct. There is no mismatched from the plant break down Lo records. Verification team confirms no unforeseen activity observed during the present verification which can alter the applicability or additionality of the applied methodology.
CAR Closed.

CAR ID	03	Section no.	E.6.2	Date: 24/04/2021
Description of CAR				
<i>PP has not submitted the copies of monthly generation reports and invoices to DOE for verification of net electricity exported to grid and emission reduction achieved by the project activity during the current monitoring period. Further, PP is requested to submit the emission reduction calculation sheet. Corrective action is sought.</i>				
Project participant response				Date: 07/05/2021
Monthly Generation Report, monthly invoices and ER Sheet have been submitted to verification Team. Delay period of calibration has been mentioned in MR.				
Documentation provided by project participant				
JMR, Invoice, ER Sheet				
DOE assessment				Date: 10/05/2021
PP has submitted the copies of monthly generation report/JMRs, Invoices and emission reductions calculation sheet. Verification team checked the JMRs values in ER sheet and also cross checked the same with invoices and found that all the values in ER sheet and monitoring report is consistent with the JMRs and Invoices. However, PP has applied error factor in export and import of electricity in ER sheet due to delayed calibration of electricity meter but the same is not mentioned in monitoring report.				
CAR Open				
Project participant response				14/05/2021
The details has been updated in revised MR				
Documentation provided by project participant				
Revised MR				
DOE assessment				Date: 17/05/2021
PP has removed the error factor applied from January 2016 to November 2016 from ER sheet for calculating emission reductions as there is no delayed found in meter calibration. PP has missed to mentioned the calibration dates of main and check meter calibrated on 27/10/2015 in web hosted MR and same is now added in revised MR. The calibration was valid up to 26/10/2018. The same is verified with the calibration certificate issued by the DISCOM. PP has submitted revised ER sheet calculation to verification team which is found correct and hence acceptable to verification team.				
CAR Closed.				

CAR ID	04	Section no.	E.7	Date: 24/04/2021
Description of CAR				
<i>During the onsite visit calibration details was checked, however PP has not provided the copies of calibration report of electricity meters to verification team. PP requested to submit the same.</i>				
Project participant response				Date: 14/05/2021
Calibration Reports have been provided to verification team. Also meter change report has been submitted to				

DOE.					
Documentation provided by project participant					
Calibration Certificate					
DOE assessment					Date: 10/05/2021
PP has submitted the calibration certificates of electricity meters mentioned in monitoring report. However, the electricity meter mentioned in monitoring report is different with the meter details mentioned in generation Report/JMRs. PP is requested to clarify the same. CAR Open					
Project participant response					Date: 14/05/2021
Meter change report has been submitted to verification team for assessment.					
Documentation provided by project participant					
Meter change report					
DOE assessment					Date: 17/05/2021
PP has now submitted the correct calibration certificates. Verification team checked the same and found correct, PP has missed to mentioned the calibration date of main and check meter calibrated on 27/10/2015 in web hosted MR and added the same in revised MR. The calibration of main and check meter was valid up to 26/10/2018. The details of meters including calibration are as follows:					
Meter Type	Meter ID	Accuracy of meter	Make	Date of Calibration	Validity of calibration
Main Meter	ASH05816	0.2s	Secure	27/10/2015	26/10/2018
				20/11/2017	19/11/2020
				02/12/2019	01/12/2022
Check Meter	ASH05817			27/10/2015	26/10/2018
				20/11/2017,	19/11/2020
				02/12/2019	01/12/2020
Main Meter	RJB74568			01/12/2020	30/11/2021
Check Meter	RJB74569			01/12/2020	30/11/2021
The Main Meter Sr. No ASH05816 and Check Meter Sr. No ASH05817 installed at the time of commissioning was replaced with new calibrated Main Meter Sr. No. RJB74568 and Check meter Sr. No. RJB74569 before due date of calibration. Verification team checked the meter changed certificate issued by the DISCOM and confirmed the same.					
Verification team confirms that Meters are calibrated in line with the calibration frequency mentioned in the monitoring plan of registered PDD. No delayed in calibration of meters found. PP has also submitted the meter change certificates issued by the DISCOM. Hence CAR closed .					

CAR ID	05	Section no.	E.8	Date: 24/04/2021
Description of CAR				
<ul style="list-style-type: none"> PP requested to submit the spreadsheets containing emission reductions calculation for verification of emission reductions claimed during the current monitoring period in monitoring report. ER sheet is not submitted to the DOE and hence the Emission Reductions value is thus reserved. Moreover, cross check mechanism cannot be confirmed as the Emission reduction sheet is not submitted. Estimated emission reduction calculation for the current monitoring period cannot be confirmed as the ER sheet is not provided. 				
Project participant response				Date: 07/05/2021
<ul style="list-style-type: none"> ER Sheet has been provided for current Monitoring Period and emission reduction calculation is shown there. ER Sheet has been provided. Estimated emission reduction calculation is shown in submitted ER Sheet. 				
Documentation provided by project participant				
ER Sheet				
DOE assessment				Date: 10/05/2021
PP has submitted the Emission Reductions calculation spreadsheets for the current monitoring period. The same has been checked by verification team and confirms that calculation method of emission reductions is correct and as per registered PDD. Thus, acceptable to DOE. CAR closed .				

Table 4. FAR from this verification

FAR ID	xx	Section No.		Date: DD/MM/YYYY
Description of FAR				
<i>No FAR is raised during this verification</i>				
Project participant response				Date: DD/MM/YYYY
Documentation provided by project participant				
DOE assessment				Date: 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"> • Reflect the “Clarification: Regulatory requirements under temporary measures for post-2020 cases” (CDM-EB109-A01-CLAR).
03.0	31 May 2019	Revision to: <ul style="list-style-type: none"> • 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.
Decision Class: Regulatory Document Type: Form Business Function: Issuance Keywords: project activities, verifying and certifying		