




Verification and certification report form for CDM project activities

(Version 01.0)

Complete this form in accordance with the "Attachment: Instructions for filling out the verification and certification report form for CDM project activities" at the end of this form.

VERIFICATION AND CERTIFICATION REPORT

Title of the project activity	5.10 MW Wind Power Project by Shyam Metalics & Energy Limited in Maharashtra, India
Reference number of the project activity	9697
Version number of the verification and certification report	01
Completion date of the verification and certification report	16 February 2017
Monitoring period number and duration of this monitoring period	1st Monitoring period, 23/07/2013 to 30/09/2016 (both days included)
Version number of monitoring report to which this report applies	Version 02, dated 31 January 2017
Crediting period of the project activity corresponding to this monitoring period	23 Jul 13 - 22 Jul 23 (Fixed)
Project participant(s)	M/s Shyam Metalics & Energy Limited
Host Party	India
Sectoral scope(s), selected methodology(ies), and where applicable, selected standardized baseline(s)	Sectoral Scope:01 Energy Industries (renewable / non-renewable sources) Selected Methodology: AMS I.D, "Grid connected renewable electricity generation" (Version 17)
Estimated GHG emission reductions or net anthropogenic GHG removals for this monitoring period in the registered PDD	27,195tCO ₂ e
Certified GHG emission reductions or net anthropogenic GHG removals for this monitoring period	23,457tCO ₂ e
Name of DOE	Perry Johnson Registrar Carbon Emission Services Inc. (PJRCES).
Name, position and signature of the approver of the verification and certification report	 Bilal Anwar Final Approver.

SECTION A. Executive summary

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M/s. Shyam Metalics & Energy Limited [Hereafter, referred as PP] commissioned PJRCES Inc. to verify the emission reductions for the CDM project titled, "5.10 MW Wind Power Project by Shyam Metalics & Energy Limited in Maharashtra, India" [hereafter referred as "the project"]. The period under verification is 23/07/2013 to 30/09/2016 (both days included).

The report summarizes the findings of the verification of the Project, performed on the basis of UNFCCC criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The project is a small scale wind power plant with total installed capacity of 5.10MW. There are 6 No. of wind turbine generators (WTGs) each of 850 kW installed at Sangli District of Maharashtra State in India. The generated electricity from the WTGs is being supplied to the NEWNE Grid.

The verification is based on the currently valid documentation of the United Nations Framework Convention on Climate Change (UNFCCC).

The verification process includes three phases: 1) desk review of documents; 2) on-site inspection and follow-up interviews with the relevant personnel; 3) resolution of outstanding issues and the issuance of final verification report and opinion.

Five CLs (CL#01-CL#5) were raised in the verification process and successfully closed upon the project participant taken actions and submitted the revised monitoring report and supporting evidence. No Forward Action Request (FAR) was raised during this monitoring period.

In summary, it is PJRCES, Inc's opinion that the "5.10 MW Wind Power Project by Shyam Metalics & Energy Limited in Maharashtra, India" is implemented as planned and described in the registered project design document v04, dated 06 June 2013. The monitoring system is in place and emission reductions are calculated without material misstatements. PJRCES, Inc.'s, opinion relates to project's GHG emissions and the resulting GHG emissions reported and related to the valid and registered project baseline, monitoring and associated documents.

Based on the verified amount of emission reductions stated in the verification report, PJRCES confirms the following statement, and requests the CDM-EB to issue the CERs:

Actual emission reduction for the monitoring period up to (and including) 31 December 2012	0 tCO ₂ e
Actual emission reduction for the monitoring period from (and including) 1 January 2013 onwards	23,457tCO ₂ e
Total amount of GHG emission reductions or net GHG removals by sinks achieved in this monitoring period (23/07/2013 to 30/09/2016)	23,457tCO ₂ e

A.2 Objective:

The objective of CDM verification is to conduct a thorough, independent assessment of the registered project activities. In carrying out its verification work, the DOE shall ensure that the project activity complies with the requirements of paragraph 62 of the CDM modalities and procedures. In particular, this assessment shall:

- Ensure that the project activity has been implemented and operated as per the registered CDM- PDD, and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place;
- Ensure that the monitoring report and other supporting documents provided are complete in accordance with latest applicable version of the completeness checklist for requests for issuance of CERs, verifiable, and in accordance with applicable CDM requirements;

- Ensure that actual monitoring systems and procedures comply with the monitoring systems and procedures described in the monitoring plan or any revised approved monitoring plan, and the approved methodology including applicable tool(s);
- Evaluate the data recorded and stored as per the monitoring methodology including applicable tool(s).

A.3 Scope

The verification scope is defined as an independent and objective review and ex-post determination of the monitored GHG emission reductions. The verification is based on the validated and registered project design document, the monitoring report made public on UNFCCC CDM website, emission reduction calculation spreadsheet, and supporting documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations.

Where, no specific means of verification is specified; the verification team has applied the standard auditing techniques as described in section 11.3.1 of the VVSv9.0.

The verification is not meant to provide any consulting service towards the PPs. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project monitoring towards reductions in the GHG emissions.

A.4 GHG Project Description

The Project consists of 6 sets of wind turbine generators (WTGs) providing a total installed capacity of 5.10MW. All the WTGs (850kW G58 Gamesa made) are installed in different villages in Sangli District of Maharashtra state, India. The generated electricity from the WTGs is being supplied to the NEWNE grid.

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 review	On-site inspection	Interview(s)	Verification findings
1.	Team Leader /Lead Verifier/ Technical Expert.	IA	Sharma	Anjana	PJRCDM (I) Pvt. Ltd. (site office of PJRCES Inc.)	✓		✓	✓
2.	Lead Verifier/Technical Expert	OR	Chaudhari	Tushar	Outsourced Entity	✓	✓	✓	

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	OR (Internal Resource)	Anwar	Bilal	PJRCES Central Office
2.	Approver	OR (Internal Resource)	Anwar	Bilal	PJRCES Central Office

SECTION C. Application of materiality

All the data and information has been checked during current verification of the project under consideration for the monitoring period from 23 July 2013 to 30 September 2016, thus, the concept of materiality has not applied in planning and conducting the verification.

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.	NA	NA	NA	NA
...				

C.2. Consideration of materiality in conducting the verification

>> NA

SECTION D. Means of verification**D.1. Desk review**

>> The assessment of the project documentation provided by the project participant is based upon both quantitative and qualitative information on emission reductions. Quantitative information comprises the reported numbers in the webhosted monitoring report (MR) v01 dated 27 October 2016 /1/ and emission reduction calculation spreadsheet /2/. Qualitative information comprises information on internal management controls, calculation procedures, and procedures for transfer of data, frequency of emissions reports, and review and internal audit of calculations.

In-line with Procedures for making the monitoring report available to the public in accordance with §62 of the modalities and procedures for the CDM, monitoring report, v1.0 dated 27 October 2016/1/ was made publicly available at UNFCCC CDM website (<https://cdm.unfccc.int/Projects/DB/RINA1374589833.08/iProcess/PJR%20CDM1478070722.32/view>).

In addition to the monitoring documentation provided by PP, the verification team reviewed:

- Registered CDM-PDD, v4, Dated 06/06/2013 (<https://cdm.unfccc.int/Projects/DB/RINA1374589833.08/view>)/3/;
- Validation report, V1.1 dated 23 July 2013 (<https://cdm.unfccc.int/Projects/DB/RINA1374589833.08/view>) /3/;
- Applied monitoring methodology AMS-I.D.-, version 17. /13/;
- Relevant decisions, clarifications and guidance from CMP and CDM Executive Board.

Appendix 3 of this report contains a complete list of all documents and proofs reviewed by the verification team.

D.2. On-site inspection

Date of on-site inspection: 11 January 2017				
No.	Activity performed on-site	Site location	Date	Team member
1.	<ul style="list-style-type: none"> ➤ Implementation of the proposed project; ➤ Calibration frequency and records for energy meters ➤ Compliance with regulatory requirement(s); ➤ Actual operation of the WTGs under the proposed project. ➤ Monitoring arrangements and connection to grid. ➤ Document verification like commissioning certificates, GPS Coordinates of WTGs, Calibration records, Power purchase agreement, electricity generation records 	Village Malal, Rampur, Sangli district, Maharashtra	11 January 2017	Tushar Chaudhari

D.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Patil	Ramkrishna	Enking	January-February 2016	Commissioning certificates/Calibration records/monitored data	Anjana Sharma.

D.4. Sampling approach

>> Sampling approach has not been applied during the current verification of the project activity for the monitoring period from 23 July 2013 to 30 September 2016. Entire set of data was verified by the verification team.

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

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
Compliance of the monitoring report with the monitoring report form			
Compliance of the project implementation with the registered PDD			
Post-registration changes			
Compliance of the monitoring plan with the monitoring methodology including applicable tool and standardized baseline			
Compliance of monitoring activities with the registered monitoring plan	3		
Compliance with the calibration frequency requirements for measuring instruments	1		
Assessment of data and calculation of emission reductions or net removals			
Others (please specify)			
Total	4		

SECTION E. Verification findings**E.1. Compliance of the monitoring report with the monitoring report form**

Means of verification	Through cross-check and comparison, to confirm the applied monitoring report form
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	is valid and listed in UNFCCC website.
Findings	The verification team has reviewed the latest version 02, dated 31 January 2017 /01/, of the monitoring report and confirms that the same has been completed using the latest version 5.1 of the monitoring report form.
Conclusion	Verification team confirms that the final version of the monitoring report i.e. v2.0 dated 31 January 2017 /01/ is in compliance with the latest available CDM-MR-FORM, v5.1/9/. Verification team also confirms that the filled-in information in the above stated final version of the MR is also in line with the “ <i>Instructions for filling out the monitoring report form</i> ”.

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

>> The present verification is conducted for the first monitoring period 23 July 2013 to 30 September 2016 (both days included). Hence, there is no previous verification team. Verification team further reviewed the validation report /3/ and identified no Forward Action Request that has to be addressed during the current monitoring period.

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

Means of verification	<p>The verification team has performed an on-site inspection to assess:</p> <ol style="list-style-type: none"> 1) If all physical features (technology, project equipment, and monitoring and metering equipment) of the registered CDM project activity are in place. 2) If the PP has operated the project activity as per the registered PDD /13/ and revised monitoring plan. <p>The verification team has:</p> <ul style="list-style-type: none"> ➤ Applied the GPS instruments to check the project location and geo-coordinates; ➤ Checked onsite the nameplates /4/ to confirm if the project equipment installation as well as installed capacity is consistent with the registered approved revised PDD. ➤ Onsite checked the electricity meters and diagram of power connection system to confirm monitoring and metering equipment are in place. ➤ Reviewed daily generation records as well as monthly generation reports at the project site /6/, commissioning certificates of all the individual WTGs /5/ to confirm if project has been operated as per the registered approved revised PDD /3/. ➤ Interviewed relevant personnel for the project implementation information, and assessed the implementation status.
Findings	<p>Based on the site visit, verification team was able to verify that the project has been implemented and operated in line with the approved revised PDD, version 04 dated 06 June 2013 /3/. The details regarding different components at both the sites are as follows:</p> <ul style="list-style-type: none"> ✓ Generation system: The project comprises of installation of 6 WTGs resulting in total installed capacity of the project is 5.10 MW. All the (850 kW each) WTGs have been installed in different villages (Rampur and Malal) in Sangli district in Maharashtra state, India. . Two WTGs (GJN5 & GJN7) were commissioned on 31 March 2012 while the remaining four WTGs (GJN47, GJ 09N1, GJ41 & GJ43N) were commissioned between the period from 26 September 2012 till 30 September 2012. The same has been verified against the commissioning certificates issued by the state authority. Hence, verification team was able to confirm that the capacity of the project is in-line with the registered PDD. Clarification request (CL#02) related to unique identification number of WTGs was raised which was subsequently closed upon discussions with the PP and verification of different documentation provided by PP. Details included under CL#02 in Appendix 4 below.

	<p>✓ Power System: As confirmed from the single line diagram of the power system and described in the monitoring report, the power generated from project WTGs is delivered to NEWNE grid through transmission and distribution lines.</p> <p>Clarification request (CL#04) was raised as the flow-diagram as included in the monitoring plan did not match with the actual scenario at site. The same was subsequently closed on detailed discussions with the PP. Further details are included under CL#04 in Appendix 4 below.</p> <p>Hence, verification team was able to confirm that the power systems implemented and described in the MR; is in-line with the registered PDD.</p> <p>✓ Meter System:</p> <p><u>Maharashtra site:</u> The power is generated at voltage of 690 V, which is stepped up to 33 kV at transformers located in a small yard adjacent to each WTG, before being fed into 110/33/11 kV Jath substation, which is the grid interconnection point. There are two feeders at the substation. There is a set of dedicated main and check meter (both tri-vector meters) at the connecting point of the feeders. The same set of meters has been used during the current verification period to monitor the electricity supplied by the project activity to the grid. The information included in the monitoring report has been verified against the Joint meter reading (JMR) reports issued by the state electricity authority, (MSEDCL).</p> <p>The data is also measured using Supervisory control and data acquisition system (SCADA) installed at Wind turbine generator controller on daily basis.</p> <p>Based on the document review, verification team confirms that the metering system has been implemented as per the registered CDM PDD.</p>
	<p>On the basis of above discussion and in-line with the requirement of §385 of VVS, v9.0 /11/, verification team was able to confirm that:</p> <ul style="list-style-type: none"> ➤ the implementation of the project is consistent with the registered PDD /3/; ➤ the project is operated as per the registered PDD by PP; ➤ Information provided in the MR is in accordance with that stated in the registered PDD. <p>Emission reductions achieved by the project activity during this monitoring report is consistent with the estimated ERs in the registered PDD. There is no increase in the emission reductions as compared to estimated emission reductions for this particular monitoring period.</p>

E.4. Post-registration changes

E.4.1. Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline

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NA

E.4.2. Corrections

>>
NA

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

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NA

E.4.4. Inclusion of a monitoring plan to a registered project activity

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NA

E.4.5. Permanent changes from registered monitoring plan, monitoring methodology or standardized baseline

>>NA.

E.4.6. Changes to the project design of a registered project activity>>
NA**E.4.7. Types of changes specific to afforestation and reforestation project activities**>>
NA**E.5. Compliance of monitoring plan with the monitoring methodology including applicable tool and standardized baseline**

Means of verification	The monitoring plan of the Project has been assessed against the monitoring methodology /13/.
Findings	<p>The project activity has applied monitoring methodology AMS-I.D.-“Grid connected renewable electricity generation” (Version 17)”, along with the “<i>Tool to calculate the emission factor for an electricity system</i>”, Version 01, EB 35 /13/.</p> <p>All the monitoring parameters that were mentioned in the monitoring methodology are clearly mentioned in the monitoring plan. The parameters are listed below:</p> <p>Baseline emissions:</p> <ul style="list-style-type: none"> ➤ EG BL, y - Quantity of net electricity supplied to the grid by project activity in year y ➤ EGEXP,PA,y) - Quantity of electricity exported to the grid by project activity in year y ➤ EGIMP,PA,y - Quantity of electricity imported from the grid by project activity in year y. <p>Project emissions: For wind energy projects, no parameter is required to be monitored in line with the applied baseline and monitoring methodology AMS-I.D., version 17.</p> <p>Leakage Emissions: For wind energy projects, no parameter is required to be monitored in line with the applied baseline and monitoring methodology AMS-I.D., version 17.</p>
Conclusion	From the above discussion above, verification team was able to confirm that the monitoring plan is in accordance with the approved monitoring methodology AMS-I.D., version 17, “-“Grid connected renewable electricity generation” and the “ <i>Tool to calculate the emission factor for an electricity system</i> ”, applied by the registered PDD. This is in line with the requirement of §388 of VVS, v9.0 /11/.

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 parameters reported in the MR have been checked against the registered PDD /3/ and the applied methodology AMS-I.D.,version 17 /13/ by the verification team.
Findings	<ul style="list-style-type: none"> ➤ Combined Margin Emission Factor [EF_y]: 0.9528 tCO₂e/ MWh Source of data: CEA website Version: 07; Purpose of Data: Calculation of baseline emissions or baseline net GHG removals by sinks. ➤ CO₂ Operating Margin emission factor of the grid [EF_{OM,y}]: 0.9842 tCO₂e/ MWh Source of data: CEA website Version: 07;

	<p><u>Purpose of Data:</u> Calculation of baseline emissions or baseline net GHG removals by sinks</p> <p>➤ CO₂ Build Margin emission factor of the grid: 0.8588 tCO₂e/ MWh</p> <p><u>Source of data:</u> CEA website Version: 07;</p> <p><u>Purpose of Data:</u> Calculation of baseline emissions or baseline net GHG removals by sinks.</p>
Conclusion	Verification team confirms that the value of combined margin emission factor, as stated in Monitoring report is consistent with the registered CDM-PDD.

E.6.2. Data and parameters monitored

Means of verification	<p>According to Para. 390 of VVS Version 9.0 /11/, verification team performed the following activities to determine whether the monitoring of parameters related to the GHG emission reductions has been implemented in accordance with the registered monitoring plan.</p> <p>(a) Through the on-site inspection of the monitoring system, interview with the operation staff, document review including relevant records, procedures and technical specifications, the verification team has assessed the implementation of the registered monitoring plan followed by the PP;</p> <p>(b) The parameters stated in the registered monitoring plan have been checked by means above;</p> <p>(c) The verification team also checked the metering system at project sites by on-site inspection, also verified the single line flow-diagram of power system and finally the meter calibration reports /8/;</p> <p>(d) The monthly and daily electricity generation records and electricity sales invoices were also checked by the team to confirm the monitoring results /6/, /7/;</p> <p>(e) Interview with the top management and operation staff PJRCES verification team assessed the quality assurance and quality control procedures applied by the PP.</p> <p>No sampling plan was involved in the project activity. Entire set of data was verified.</p>
Findings	<p>All parameters are monitored and reported in-line with the registered monitoring plan. Parameter-wise details have been summarized below:</p> <p><u>BASELINE EMISSIONS (MAHARASHTRA SITE):</u></p> <p>✓ Quantity of net electricity supplied to the grid by project activity in year y [$EG_{BL,y}$]:</p> <p><u>Value applied for calculations:</u> 24,619.11 MWh</p> <p><u>Source of data:</u> Monthly joint meter reading (JMR) at pooling substation /6/;</p> <p>The parameter is continuously measured and monthly recorded</p> <p><u>Calculation method:</u> The parameter is continuously measured at the WTG controller end as well as at the energy meters (main and check meters) at the substation (both feeders). This arrangement has been verified BY by PJRCES verification team during the site visit.</p> <p>As stated above, the source of this parameter is JMR reports issued by the stated electricity authority. PP has no role in the preparation of JMR reports. The procedure of apportioning carried out at state authority's end (as discussed in the registered PDD, Final monitoring report) is beyond PP's scope. PP receives only the final monthly JMR report which shows the export,/import to/from grid and final net electricity supplied to the grid by the project WTGs. This forms the basis for the monthly invoices raised by the PP and also forms the basis for monthly emission reduction calculations.</p> <p>In the JMR received by the PP, net electricity supplied to the grid is calculated based on the difference of amount of electricity exported to the grid and electricity imported by the project from the grid as per below equation:</p>

$$(EG_{\text{Net Exported}} = EG_{\text{Exported}} - EG_{\text{Import}})$$

QA/ QC Procedure: PJRCES verification team has cross-checked this parameter against the invoices /7/ raised by PP for the sale of electricity. The same is in line with the registered monitoring plan.

Further, all the meters (both main and check meters at both the feeders) used for monitoring the total electricity supplied by the project activity to the grid are calibrated regularly in line with the registered monitoring plan. There have been instances of missed calibration as well, however, PP has applied correction factor in line with §395 of VVS v9.0 to arrive at conservative value of this parameter.

✓ ***Quantity of electricity exported to the grid by project activity in year y*** $[EG_{\text{EXP,PA,y}}]$:

Value applied for the calculations: 246,88.84 MWh

Source of data: JMR report and Break up sheet provided by Gamesa to MSEDCL /6/

The parameter is continuously measured and monthly recorded.

Calculation method: NA, this parameter is directly measured with energy meters at the substation. The joint meter reading report and the break-up sheet (based on apportioning procedure) is provided by the O&M contractor to state authorities which in turn issues the final JMR including export, import and net electricity supplied to grid to individual WTG owners including PP.

QA/ QC Procedure: PJRCES verification team has cross-checked this parameter against the invoices /7/ raised by PP for the sale of electricity

Further, the meters (main and check at both the feeders) used for the monitoring of this parameter are calibrated on annual basis. Both main and check meters are rated and error is within the permissible limit of 0.2%. There have been instances where the calibration records are not available, hence, the correction factor in line with section 11.4.5 of VVS V9.0 has been applied/11/.

✓ ***Quantity of electricity imported from the grid by project activity in year y*** $[EG_{\text{IMP,PA,y}}]$:

Value applied for the calculations: 69.73 MWh

Source of data: JMR report and Break up sheet provided by Gamesa to MSEDCL /6/

The parameter is continuously measured and monthly recorded.

Calculation method: NA, this parameter is directly measured with energy meters. The monitoring of this parameter is same as for the parameter “Quantity of electricity exported to the grid by project activity in year y” as discussed above.

QA/ QC Procedure: PJRCES verification team has cross-checked this parameter against the invoices /7/ raised by PP for the sale of electricity

Further, the meters (main and check at both the feeders) used for the

	<p>monitoring of this parameter are calibrated on annual basis. Both main and check meters are rated and error is within the permissible limit of 0.2%. There have been instances where the calibration records are not available, hence, the correction factor in line with section 11.4.5 of VVS V9.0 has been applied//11/.</p> <p>PROJECT EMISSIONS: FOR WIND ENERGY PROJECTS, NO PARAMETERS ARE REQUIRED TO BE MONITORED.</p> <p>LEAKAGE EMISSIONS: FOR WIND ENERGY PROJECTS, NO PARAMETERS ARE REQUIRED TO BE MONITORED.</p>
Conclusion	<p>On the basis of above discussion and in-line with the requirement of §392 – §393 of VVS, v9.0 /11/; verification team confirms that:</p> <ul style="list-style-type: none"> → Monitoring activities for the project activity has been carried out in accordance with the revised monitoring plan. → all monitoring parameters required by the monitoring plan have been sufficiently monitored and correctly listed; → Information flow (from data generation, aggregation, to recording, calculation and reporting) for each parameter has been verified and found to be appropriate.

E.6.3. Implementation of sampling plan

Entire set of data has been verified for the current monitoring period starting from 23 July 2013 till 30 September 2016. No sampling plan has been followed; hence, this section is not applicable.

Means of verification	NA
Findings	NA
Conclusion	NA

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

Means of verification	The verification team has verified the calibration records against the registered monitoring plan and relevant national or local standard /3/.																																			
Findings	The project under consideration uses energy meters (main and check meters) as measuring instruments to monitor the net electricity supplied to the grid.																																			
	<i>Energy Meters:</i>																																			
	➤ The registered monitoring plan /3/ requires the energy meters at the metering points (all main and check meters) to be calibrated on annual basis.																																			
	During the current monitoring period, it has been observed that the meters are duly calibrated and within specified calibration frequency. There were instances of missed calibration, however, in line with section 11.4.5. of VVS v9.0 /11/, PP has applied the correction factor to arrive at conservative figure for net electricity supplied to the grid. The details of calibration are as included in the table below:																																			
	<table><tr><th>Location/ Type</th><th>Meter Sr Number</th><th>Make</th><th>Accuracy class</th><th>Calibration date</th><th>Next calibration due date</th><th>Delay in calibration period applied</th></tr><tr><td>Feeder 1 Main meter</td><td>13099021</td><td>Elster A1800</td><td>0.2s</td><td rowspan="2">01/10/2013, 12/06/2014, 07/08/2015, 12/08/2016</td><td rowspan="2">12/08/2017</td><td rowspan="2">From 23/07/2013 to Oct 2013, From June 2015 to August 2015, For August 2016</td></tr><tr><td>Feeder 1 Check meter</td><td>13132615</td><td>Elster A1800</td><td>0.2s</td></tr><tr><td>Feeder 2 Main meter</td><td>13132626</td><td>Elster A1800</td><td>0.2s</td><td rowspan="2">01/10/2013, 17/07/2014, 07/08/2015, 12/08/2016</td><td rowspan="2">12/08/2017</td><td rowspan="2">From 23/07/2013 to Oct 2013, From June 2015 to August 2015, For August 2016</td></tr><tr><td>Feeder 2 Check meter</td><td>13132613</td><td>Elster A1800</td><td>0.2s</td></tr></table>							Location/ Type	Meter Sr Number	Make	Accuracy class	Calibration date	Next calibration due date	Delay in calibration period applied	Feeder 1 Main meter	13099021	Elster A1800	0.2s	01/10/2013, 12/06/2014, 07/08/2015, 12/08/2016	12/08/2017	From 23/07/2013 to Oct 2013, From June 2015 to August 2015, For August 2016	Feeder 1 Check meter	13132615	Elster A1800	0.2s	Feeder 2 Main meter	13132626	Elster A1800	0.2s	01/10/2013, 17/07/2014, 07/08/2015, 12/08/2016	12/08/2017	From 23/07/2013 to Oct 2013, From June 2015 to August 2015, For August 2016	Feeder 2 Check meter	13132613	Elster A1800	0.2s
	Location/ Type	Meter Sr Number	Make	Accuracy class	Calibration date	Next calibration due date	Delay in calibration period applied																													
Feeder 1 Main meter	13099021	Elster A1800	0.2s	01/10/2013, 12/06/2014, 07/08/2015, 12/08/2016	12/08/2017	From 23/07/2013 to Oct 2013, From June 2015 to August 2015, For August 2016																														
Feeder 1 Check meter	13132615	Elster A1800	0.2s																																	
Feeder 2 Main meter	13132626	Elster A1800	0.2s	01/10/2013, 17/07/2014, 07/08/2015, 12/08/2016	12/08/2017	From 23/07/2013 to Oct 2013, From June 2015 to August 2015, For August 2016																														
Feeder 2 Check meter	13132613	Elster A1800	0.2s																																	
Conclusion	On the basis of above discussion and in-line with the provisions of §395 & 400 of VVS, v9.0 /11/; verification team was able to confirm that in the absence of any calibration records of meters for the current verification period. PP has correctly applied the correction factor in line with §395 of VVS v9.0.																																			

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	<p>According to the Para.402 of VVS Version 09.0 /11/, the verification team has performed the following activities to assess the data and calculations of GHG emission reductions achieved by the Project in line with the methodology:</p> <ul style="list-style-type: none"> ✓ Through desk review and on-site inspection; ✓ Review of monthly generation records (JMRs) /6/, invoices /7/, to verify that a complete set of data for the specified monitoring period is available. ✓ Information provided in the monitoring report has also been cross-checked with other sources such as electricity invoices /7/; ✓ Review of calculations of baseline GHG emissions has been carried out in accordance with the formulae and methods described in the registered PDD /3/, and the applied methodology /13/; ✓ Review emission factors as per registered PDD.
Findings	<p>Verification team, in accordance with the applied methodology AMS-I.D., v17/13/ undertook the evaluation of calculations applied in order to calculate the emission reductions during the current monitoring period.</p> <p>Baseline Emissions:</p> <p>In-line with applied methodology, baseline emissions are calculated as:</p> <p>The baseline emission is calculated as:</p> $BE_y = EG_{BLY} * E_{NEWNE, CM, y}$ <p>Where:</p> <p>BE_y : Baseline emissions in year y (tCO₂/yr).</p> <p>EG_{BLY} : Net Electricity supplied by the project activity to the grid (MWh).</p> <p>$E_{NEWNE, CM, y}$: Combined margin CO₂ emission factor for grid connected power generation in year y. This value has been fixed ex ante in the registered PDD.</p> $BE_y = EG_{BLY} * E_{NEWNE, CM, y}$ $= 24,619 \text{ MWh} \times 0.9528 \text{ tCO}_2/\text{MWh} /2/$ $= \mathbf{23,457 \text{ tCO}_2e}$ <p>For the current monitoring period, verification team cross-checked the data from the invoices and meter reading records (JMRs) and found the values consistent with that represented in the ER spreadsheet /2/. It is to be noted that the final value for "net electricity supplied to grid" used in the formula above is after applying the correction factor due to delayed calibration of energy meters.</p> <p>Total Baseline emissions = 23,457 t CO₂e</p>
Conclusion	<p>Verification team, in-line with §402(c)-§402(e) of VVS, v9.0 /11/; confirms that formulae, assumptions and default emission factors used in the emission reduction calculation /1/ /2/ are reasonable and are in line with the approved monitoring methodology and the registered monitoring plan /3/ and therefore, leads to the conservative estimation of emission reductions.</p>

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

Means of verification	Project Emissions: For wind energy projects, no project emissions are required to be calculated in line with the applied methodology /13/.
Findings	NA
Conclusion	NA

E.8.3. Calculation of leakage GHG emissions

Means of verification	Leakage Emissions: For wind energy projects, no leakage emissions are required to be calculated in line with the applied methodology /13/.
Findings	NA
Conclusion	NA

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

Means of verification	The verification team has reviewed the calculation of GHG emission reductions in the final MR /1/ and ER spreadsheet /2/ as per the registered PDD and the applied methodology.											
Findings	<p>The emission reductions during the current verification period are determined as the difference between baseline emissions, project emissions and leakage:</p> $ER_y = BE_y - PE_y - L_y.$ <p>Hence,</p> <p>Emission Reductions:</p> <table><tr><th>BASILINE EMISSIONS (tCO₂e)</th><th>PROJECT EMISSIONS (tCO₂e)</th><th>LEAKAGE EMISSIONS (tCO₂e)</th><th>EMISSION REDUCTIONS (tCO₂e)</th></tr><tr><td>23,457</td><td>0</td><td>0</td><td>23,457</td></tr></table>				BASILINE EMISSIONS (tCO ₂ e)	PROJECT EMISSIONS (tCO ₂ e)	LEAKAGE EMISSIONS (tCO ₂ e)	EMISSION REDUCTIONS (tCO ₂ e)	23,457	0	0	23,457
BASILINE EMISSIONS (tCO ₂ e)	PROJECT EMISSIONS (tCO ₂ e)	LEAKAGE EMISSIONS (tCO ₂ e)	EMISSION REDUCTIONS (tCO ₂ e)									
23,457	0	0	23,457									
Conclusion	<p>Corresponding to the paragraph 403 of VVS version 09.0 /11/, PJRCES verification team confirms that:</p> <ul style="list-style-type: none">➤ A complete set of data for the monitoring period is available.➤ Information provided in the monitoring report /1/ has been cross-checked with other sources;➤ Calculations of baseline emissions, and project activity emissions and leakage, as appropriate, been carried out in accordance with the formulae and methods described in the registered monitoring plan /3/ and the applied methodology document.➤ There are no assumptions in emission reductions calculation.➤ An appropriate emission factor of the power grid has been correctly applied.											

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

Means of verification	The comparison of actual GHG emission reductions achieved during the current verification period (23 July 2013 to 30 September 2016) /1/ /2/ with estimates in registered PDD (for the same period) /3/ has been checked by the verification team.
Findings	<p>According to "Project Standard" /10/, the MR as well as the emission reduction excel sheet contains the comparison of the actual emission reduction claimed in the monitoring period with the estimated figures for the same monitoring period (27, 195 tCO₂e) as per the registered PDD.</p> <p>The actual emission reductions have been verified as 23,457 tCO₂e for the same period.</p>
Conclusion	<p>Corresponding to the paragraph 256 of CDM Project Standard version 09.0, /11/ PJRCES can confirm that:</p> <p>A comparison of actual GHG emission reductions or net anthropogenic GHG removal of the project activity achieved during this monitoring period with the estimates in the registered PDD has been provided, and the results are correct.</p>

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

Means of verification	The verified emission reductions are less than the estimated value in the monitoring period. Thus, no remarks need to be provided in the MR.
Findings	No finding identified in this section.
Conclusion	The actual GHG emission reductions are lower than the proportional estimates in the registered PDD.

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 current monitoring period starts from 23 July 2013. The verification team has reviewed the monitoring report /1/, ER excel sheet /2/, monthly generation reports (Joint Meter Reading report (JMRs)/6/, invoices /7/ to assess whether the GHG emission reductions or removals has been correctly calculated.								
Findings	<p>The GHG emission reductions have been correctly calculated.</p> <p>Total Year-Wise emission reductions:</p> <table border="1"> <thead> <tr> <th>Period</th><th>Emission Reductions (tCO₂e)</th></tr> </thead> <tbody> <tr> <td>Up to 31 December 2012</td><td>0</td></tr> <tr> <td>From 1 January 2013 onwards</td><td>23,457</td></tr> <tr> <td>Total</td><td>23,457</td></tr> </tbody> </table>	Period	Emission Reductions (tCO ₂ e)	Up to 31 December 2012	0	From 1 January 2013 onwards	23,457	Total	23,457
Period	Emission Reductions (tCO ₂ e)								
Up to 31 December 2012	0								
From 1 January 2013 onwards	23,457								
Total	23,457								
Conclusion	<p>According to Para 254 of CDM Project Standard (Version 09.0) /11/, PJRCES verification team confirms that:</p> <p>The amount of emission reductions or removals achieved in the monitoring period 23 July 2013 till 30 September 2016 has been correctly calculated.</p>								

SECTION F. Internal quality control

>> PJRCES has taken the following quality control measures within the verification team and of the verification process according to relevant PJRCES's internal procedures:

- The application review of the verification was conducted and concluded that PJRCES has the accredited scope and competence to verify the Project with impartiality as well;
- The verification team was selected with due considerations given in terms of the competence and impartiality;
- The verification team carried out the verification work and compiled a verification report strictly following PJRCES's Procedures for Implementation of Verification.

The verification report submitted by the verification team was subject to a technical review and decision-making process. The technical reviewers and decision-makers (approver) are qualified and independent from the verification team. If any issue is raised during technical review and/or decision-making (approval stage), the same is to be discussed between the issue-raiser and the team leader as well as the PP. All issues must be satisfactorily addressed before the submission of the report for final approval. The persons who conducted the technical review and decision-making for the Project are shown in section B.2 this report.

The report approved by the authorized official of PJRCES as the final report together with relevant documents are submitted to CDM EB through the UNFCCC dedicated web-platform for request for issuance (only if an unconditioned positive verification/certification opinion is concluded).

SECTION G. Verification opinion

>> It is PJRCES Inc.'s opinion that the GHG emission reductions for the period 23 July 2013 to 30 September 2016 (both days included), as reported in the monitoring report, v02 dated 31 January 2017 are fairly stated. The GHG emissions were calculated correctly on the basis of AMS-I-D, version 17, registered monitoring plan and registered CDM-PDD. Based on the evidence and information that are considered necessary to guarantee that GHG emission reductions are appropriately calculated, PJRCES Inc. confirms the following statement:

Baseline Emissions : 23,457 t CO₂e
 Project Emissions : 0
 Leakage Emissions : 0
 Emission Reductions : 23,457 t CO₂e

SECTION H. Certification statement

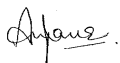
>>

Perry Johnson Registrars Carbon Emissions Services, Inc (PJRCES) has performed verification of emission reductions reported from CDM project activity, "*5.10 MW Wind Power Project by Shyam Metalics & Energy Limited in Maharashtra, India*" for the period starting from 23 July 2013 to 30 September 2016 (both days included). The project is a registered CDM project activity bearing Unique Registration Number 9697.

PP is responsible for collection of data and reporting GHG emission reductions on the basis set out within the registered monitoring plan and in registered CDM-PDD. The project activity applies AMS-I.D., version 17.

The responsibility of PJRCES Inc. is to express an independent verification and certification statement for the emission reductions reported in the monitoring report, v02, dated 31 January 2017, for the period 23 July 2013 to 30 September 2016 (both days included).

The verification consisted of the following three phases: i) desk review of the project design, the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final verification report and opinion. PJRCES Inc. also requested for evidences, relevant information and explanations that were considered necessary to give a reasonable assurance of the reported emission reductions.



Anjana Sharma
(Team Leader)



Bilal Anwar
(Approver)

Appendix 1. Abbreviations

Abbreviations	Full texts
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEF	Carbon Emission Factor
CER	Certified Emission Reduction
CL	Clarification request
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
CM	Combined Margin
ER	Emission Reductions
GHG	Greenhouse gas(es)
GWP	Global Warming Potential
EB	Executive Board
MP	Monitoring Plan
MR	Monitoring report
MWh	Mega Watt Hour
MSEDCL	Maharashtra State Electricity Dispath Company Ltd.
NEWNE	North East West North-East
OM	Operational Margin
PCP	Project Cycle Procedure
PJRCS	Perry Johnson Registrars Carbon Emission Services
PLF	Plant Load Factor
PDD	Project Design Document
PP	Project Proponent
PS	Project Standard
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard

Appendix 2. Competence of team members and technical reviewers

TEAM MEMBER NAME	COMPETENCY /ROLE	EXPERIENCE
Anjana Sharma	Team Leader/Lead Verifier/Sector Expert	Anjana Sharma holds a Bachelor in Chemical Engineering. She has a combined experience of 16 years. Prior to her entry into the CDM world, she worked for 3 years in Chlor-Alkali industry wherein she was involved mainly in the plant operations, energy conservation measures and QMS. During her stint in industry, her technical responsibilities included involvement in day-to-day plant operations, analysis of consumption of different inputs to the Chlor-Alkali process (primarily the raw material, power, fuels like FO/HSD for boilers

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		<p>etc) on daily basis and preparation of consolidated monthly report. Based on that, she, in consultation with Head of Works, would identify the potential areas of improvement and presenting the same to the management. Being the member of Technical Services Cell of the company, she was actively involved in market research for the energy efficient technologies for the Chlor-Alkali process. Apart from above technical part, she was also an internal auditor for ISO 9001. She has been trained as an internal auditor as well as Lead Auditor for QMS (ISO 9001), EMS (ISO 14001) & OSHAS.</p> <p>Her experience in CDM includes 10 years in validation and verification of projects in regulated as well as non-regulated market. Prior to joining PJRCES, she worked as a CDM Validator and Technical Reviewer at another DOE for 4 years. She has handled validation and verification of numerous CDM projects, both in India & abroad in different areas like renewable energy, energy efficiency, waste heat recovery, waste handling and disposal (especially landfill gas recovery and utilization, and waste wind treatment), fuel switch etc.</p> <p>Her sufficient sectoral competence in renewable energy based energy generation, energy efficiency and waste handling and disposal is sufficiently demonstrated through her education qualification, industry experience and experience in CDM.</p>
Tushar Chaudhari	Team Member	<p>Tushar Chaudhari has completed his Masters Degree in Environmental Sciences. He has been working for the past 5.5 years in Climate change. After his Masters he worked with the M/s. Jain Irrigation Systems Limited, Jalgaon in EHS Department. He later worked with MITCON Consultancy Services Ltd. as CDM consultant working on different renewable energy, waste handling and disposal projects, carbon foot printing/GHG emission inventory. He has been in the CDM field for nearly 5.5 years. He has been working in both regulatory and open markets. Based on his work experience he has competency to work on renewable energy industries and waste handling and disposal projects.</p>
Bilal Anwar	Technical Reviewer/Approver	<p>Bilal Anwar has over twelve years of experience in International Climate Change Policy, global regimes of greenhouse gas reduction projects and corporate sector greenhouse strategies. A significant part of his experience is in Clean Development Mechanism (CDM) in which he got involved</p>

		<p>from its inception. He worked in the United Nations Framework Convention on Climate Change Secretariat (UNFCCC) where he was involved in the inter-governmental negotiation process, leading to the agreement on Marrakech Accords, which operationalized the CDM as a global carbon market mechanism. He has been closely involved in the development of CDM methodologies, its regulatory, procedural and legal frameworks in support of the CDM Executive Board. He was the team leader of CDM Accreditation Unit in the secretariat.</p> <p>Subsequently Bilal worked for two years as a Technical Director for ERM certification and Verification Services (DOE) based in London. In this role Bilal worked on the operational and management aspects of the company in order to deliver quality reports in compliance with the regulatory requirements and quality expectations of the CDM Executive Board and undertook review of CDM projects for energy, waste and transport sector.</p> <p>Currently, Bilal is responsible for final approval of CDM reports in Perry Johnson Registrars carbon Emission Services</p>
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Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
/1/	M/s Shyam Metals & Energy Limited.	Monitoring report (MR)	Final version 02 dated 31 January 2016	PP
/2/	M/s Shyam Metals & Energy Limited.	Emission reductions excel sheet		PP
/3/	DOE – DNV, DOE-SGS	1. Validation report; 2. Registered PDD	https://cdm.unfccc.int/Projects/DB/RI/NA1374589833.08/view	Project interface on UNFCCC website
/5/	Technology supplier and state electricity Authority	Commissioning certificates	1) Ref No.: SE/SC/DYEE/(WM)/03299 dated 17 April 2012 – Commissioning certificate for GJN-05&GJN-07. 2) Ref No.: SE/SC/DYEE/(WM)/9117 dated 15 October 2012 - Commissioning certificate for GJ 43-N & GJ 47-N. 3) Ref No.: SE/SC/DYEE/(WM)/9133 Dated 15 October 2012 – Commissioning certificate for GJ 41-N & GJ 09-N.	PP
/6/	State Electricity Authority	- Total Import, export, and net electricity supplied to grid during the entire monitoring period i.e. from 23 July 2013 to 30 September 2016	- Monthly generation records in form of Joint meter Reading records (JMRs) issued by state electricity authority (MSEDCL) for entire monitoring period from 23 July 2013 to 30 September 2016.	- PP
/7/	PP i.e. M/s VRL Logistics Ltd.	- Electricity Sales Invoices	- Monthly invoices for the entire verification period (23 July 2013 to 30 September 2016)	- PP
/8/	Testing labs	- Annual calibration records for Main and check meters installed at both feeders i.e. feeder 1 & Feeder 2.	- Details have been included in section E.7. above in the report.	- PP
/9/	CDM Executive	- Instructions for	- http://cdm.unfccc.int/Referenc	Others

	Board	filling out the monitoring report form (Version 05.1)	e/index.html	
/10 /	CDM Executive Board.	Clean Development Mechanism Project Standard version 09.0 CDM-EB65-A05-STAN 20 February 2015	http://cdm.unfccc.int/filestorage/e/x/t/extendfile-20150225165200470-reg_stan01.pdf/reg_stan01.pdf?t=Nm18bm5sZHNhfDBeBudn0QNzNG5AeSq4rspj	Others.
/11 /	CDM Executive Board.	Validation and Verification Standard, Version 9.0, 20 February 2015	https://cdm.unfccc.int/filestorage/e/x/t/extendfile-20150225165216290-accr_stan02.pdf/accr_stan02.pdf?t=U258bm5sZzZvfDAemtFM1VNEYw67hUNPIdf	Others
/12 /	CDM Executive Board	Approved baseline and monitoring methodology AMS-I.D., version 17		UNFCCC website

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

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

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

Table 2. CL from this verification

CL ID	01	Section no.	Date: 23/01/2017
Description of CL			
1. 1. PP needs to clarify as how the estimation of emission reductions of 27, 195 tCO ₂ has been calculated for the monitoring period. The calculations need to be included in monitoring report.			
Project participant response			Date: 31/01/2017
The current monitoring period is of 1,166 days. As per registered PDD, annual estimation of ER for 365 days are 8,513 t CO ₂ e, thus for 1,166 days ER estimation are =8,513*1,166/365=27,195 t CO ₂ e. The information is added in revised MR version 02 dated 23/01/2017			
Documentation provided by project participant			
Revised Monitoring report v2.0 dated 31 January 2017, revised emission reduction excel sheet.			
DOE assessment			Date: 16/02/2017
Calculation for estimated emission reductions for the current monitoring period has been included in the revised MR v02, dated 31 January 2017 as well as revised emission reduction excel sheet. PJRCES Verification team has verified the same and found okay.			
CL ID	02	Section no.	Date: 23/01/2017
Description of CL			

<p><i>During the site visit, it has been observed that the unique identification number of the following WTGs is different:</i></p> <ul style="list-style-type: none"> - GJ41 - GJN 5 - GJN 7 <p><i>PP to clarify the same.</i></p>			
Project participant response		Date: 31/01/2017	
<p>The WTGs are unique and PP name is mentioned for each WTGs. Location number 5 and location number 7 means - GJN 5 and GJN7. Also GJ41 is nothing but GJ41-N. Since PP name is mentioned on each WTG, thus uniqueness is justified.</p>			
Documentation provided by project participant			
Commissioning certificates, Monthly Joint meter reading reports and power purchase agreements.			
DOE assessment		Date: 16/02/2017	
<p>PJRCES verification team observed that the WTG identification numbers are not fully elaborated on the WTG towers at site. However, on further scrutiny and discussions with the PP, PJRCES verification team concluded that:</p> <ul style="list-style-type: none"> - It is just the mis-representation of WTG ID on the tower. Instead of writing the WTG ID fully (GJN 5 & GJN 7), only location number (Location 5 & Location 6) is written for WTG on the tower. While for WTG GJ41, tower shows GJ41-N. - However, the monthly JMRs issued by state authorities for these particular WTGs represent the correct IDs (as sourced from the commissioning certificates issued by same state authorities for these WTGs) of project WTGs. WTG IDs in JMR are same as stated in the registered CDM-PDD, monitoring report and ER excel sheet. - Furthermore, PJRCES verification team also observed that PP's name i.e. M/s Shyam Metalics is written on the WTG towers which further supports the fact that said WTG belong to PP and it is just the mis-representation of name on the WTG tower. - To further support the above fact, PJRCES verification team also cross-verified the commissioning certificates for three WTGs as well as the Power Purchase Agreements signed for these WTGs. <p>Based on above discussion, PJRCES has closed CL#02.</p>			
CL ID	03	Section no.	Date: 23/01/2017
Description of CL			
<p>1. <i>PP is requested to submit all the Calibration Certificates for the Main and Backup (check) electricity meters installed under the project activity in line with the calibration frequency defined in the registered monitoring plan.</i></p>			
Project participant response		Date: 31/01/2017	
<p>The calibration certificates for feeder 1 and feeder 2 are provided to DOE. Also calibration details of main and check meters are provided in revised MR.</p>			
Documentation provided by project participant			
Calibration records and revised ER excel sheet.			
DOE assessment		Date: 16/01/2017	
<p>PJRCES verification team has verified the calibration certificates provided for main and check meter at both the feeders i.e. Feeder 1 and Feeder 2. The provided calibration certificates have been found to be okay. For the period when the calibration was not done, PJRCES verified the correction factor applied. The same is found to okay and in line with para 395 (a) of VVS, v9.0.</p> <p>Based on the verification of revised ER excel sheet, calibration records for the monitoring equipment, PJRCES verification team closed CL#03.</p>			
CL ID	04	Section no.	Date: 23/01/2017
Description of CL			
<p><i>During the site visit, it has been observed that there are two separate feeders at Jath Sub-station. GJN47, JN 47, GJ09N1, GJ41, GJ43N are connected to Feeder no.2 whereas GJN5, GJN7 are connected to Feeder 01. Keeping the actual project scenario in mind, PP is required to update the flow diagram of monitoring arrangement in the monitoring report section C.</i></p>			
Project participant response		Date: 31/01/2017	
<p>The MR mentioned note below the flow diagram as "The above flow diagram is just schematic representation for common metering arrangement and each feeder (e.g G1, G2 etc) involves multiple number of WTGs based on feeder load. For current monitoring period,GJN5, GJN7 of proposed project activity are connected to Feeder 01 whereas GJN47, GJ09N1, GJ41, GJ43N proposed project activity are connected to Feeder no.2. Thus feeder 1 and Feeder 2 meter details are provided in Monitoring report".</p>			
Documentation provided by project participant			

Revised monitoring report v2.0, dated 31 January 2017

DOE assessment**Date:**16/02/2017

Revised MR, v2.0, dated 31 January 2017 has been verified. PJRCES verification team observed that the actual monitoring scenario has been included in the MR below the generic monitoring set-up shown as flow-diagram. Based on the discussions with the PP as well as PJRCES verification team's past experience, it is worthwhile to note that the feeders for the WTGs keep changing depending on the demand at state authority's side. Hence, it is not reasonable to fix the flow-diagram.

Based on above, CL#04 is closed.

CL ID

05

Section no.**Date:** 23/01/2017**Description of CL**

Referring to QA/QC procedures in section C of the monitoring report, it is stated that "If during testing, both the main & check meters are found within the permissible limits of error i.e. 0.5%, the energy computation will be as per the main meter." PP is required to explain the difference of 0.5% between main and check meter reading, given that both meters are of 0.2s accuracy class as stated in the registered PDD, MR as well as verified during the site visit.

Project participant response**Date:** 31/01/2017

The MR is corrected as 0.2% as accuracy class of meters is 0.2s. There is no any case observed where error of meters are found beyond permissible limit.

Documentation provided by project participant

Revised monitoring report v2.0, dated 31 January 2017

DOE assessment**Date:**16/02/2017

Revised MR v2.0 dated 31 January 2017 has been verified and the corrections done w.r.t the accuracy class of the meters are found to be okay. Based on this, CL#05 is closed.

Table 3. CAR from this verification

CAR ID	Section no.	Date:
Description of CAR		
NA		
Project participant response		Date:
NA		
Documentation provided by project participant		
NA		
DOE final assessment		Date:
NA		

Table 4. FAR from this verification

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