



44.40 MW Wind Energy Project by Ruchi Soya Industries Limited, India



Document Prepared By Earthood Services Private Limited

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Summary:

The project activity by Ruchi Soya Industries Ltd. involves the generation of electricity through wind power plant with a total capacity of 44.40 MW (44 WTGs with rated capacity of 600 kW each and 12 WTGs with rated capacity of 1500 kW each) in the state of Madhya Pradesh, India. This is a greenfield project activity and supply the generated electricity to the National power grid i.e., Indian Grid. Thus, project activity has reduced the dependence on fossil fuel-powered power plants by substituting carbon-intensive energy with the clean renewable wind energy. As per the baseline scenario, "Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants that are fossil fuel fired power plants". The baseline scenario is the same as the scenario existing prior to the implementation of the project activity.

During the Current Monitoring Period from 13-December-2012 to 12-December-2018 (First and last date included) the project activity has supplied 347,916.05 MWh of electricity, and thus contributing to the GHG reductions 330,047 tCO_{2e}.

EKI Energy Services Limited contracted **ESPL** to conduct the verification of the project. The scope of verification includes confirming the implementation of the monitoring plan in the registered PD (Ver. 02 dated 26-September-2011) and the application of methodology ACM0002: Consolidated methodology for grid-connected electricity generation from renewable sources, Version 12.1.0.

The verification consisted of three phases: a. Desk review of the project; b. Follow-up interviews/onsite audit; c. Resolution of outstanding issues and issuance of the final verification report and opinion. The overall verification, from Contract Review to Verification Report & Opinion, was conducted following ESPL's internal quality procedures.

A risk-based approach has been followed to perform this verification activity and No uncertainties associated with the verification. A total of 01 CL and 05 CARs have been raised during the verification process of the project activity which were successfully closed.

ESPL confirms that the monitoring system is in place and the emission reductions are calculated without material misstatements.

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INTRODUCTION

1.1 Objective

“EKI Energy Services Limited” has contracted ESPL (Hereinafter referred as Earthood) to conduct the verification of the project activity “44.40 MW Wind Energy Project by Ruchi Soya Industries Limited, India” according to the requirements of the Verified Carbon Standard Version 4.3.

The objective of this verification is to verify and certify emission reductions reported for the PA “44.40 MW Wind Energy Project by Ruchi Soya Industries Limited, India” for the period 13-December-2012 to 12-December-2018 (including both days).

1.2 Scope and Criteria

The scope of the verification is to establish/verify that:

- the appropriate VCS-MR form (and other templates) was used and correctly filled up; (As per <https://verra.org/wp-content/uploads/2019/09/VCS-V4-Summary-of-Effective-Dates.pdf> the use of updated version of all VCS Program templates and representations is mandatory from 19-March-2020)
- The project activity is in accordance with all relevant host country criteria (India);
- The project activity is in accordance with all relevant VCS rules and requirements;
- The project activity is in accordance with conditions of the latest version of applied methodology ACM0002: Large Consolidated Methodology - Version 12.1.0 /7/.

The verification of the project activity is based on the PD and estimated GHG emission reduction calculations.

1.3 Level of Assurance

☒ Reasonable level of assurance

☐ Limited level of assurance

ESPL’s verification approach is based on the understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these. ESPL planned and performed the verification by obtaining evidence and other information and explanations that ESPL considers necessary to give reasonable assurance that reported estimated GHG emission reductions are fairly stated. All documentary evidences were checked, and site visit was conducted to project plant site to arrive at a verification conclusion by the assessment team.

In our opinion, the estimated GHG emissions reductions were calculated correctly on the basis of the approved baseline and monitoring methodology ACM0002, Version 12.1.0 and the VCS standard, Version 4.3/14/.

1.4 Summary Description of the Project

The project activity by Ruchi Soya Industries Ltd. involves the generation of electricity through wind power plant with a total capacity of 44.40 MW in the state of Madhya Pradesh and Rajasthan of India. This is a greenfield project activity and supply the generated electricity to the National power grid i.e., Indian Grid. The project activity involves operation of 44 WTGs with rated capacity of 600 kW each (Suzlon make, model S-52) and 12 WTGs with rated capacity of 1500 kW each (Suzlon make, model S-82). The generated electricity is sold to Madhya Pradesh State Pashchim Kshetra Vidyut Vitaran Company Limited (MPPKVVCL) and Jodhpur Vidyut Vitran Nigam Limited (JdVVNL). Thus, project activity has reduced the dependence on fossil fuel-powered power plants by substituting carbon-intensive energy with the clean renewable wind energy. As per the baseline scenario, “Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants that are fossil fuel fired power plants”.

The project is a voluntary action being undertaken by each project owner of the project activity. EKI Energy Services Limited (hereafter referred as “EKIESL”) is acting as the other party for this project activity.

Verification team confirmed the capacity by verifying commissioning certificates/10/ and also verified through interview during onsite audit that plants are operational in the location (Madhya Pradesh). The details of interconnection with grid of wind power plant and commissioning details are given in Section 4.1 of this report.

The technical specifications of wind power plant confirmed with technical specifications from technology supplier and details as confirmed during physical visit to the project site.

The energy meters are used to monitor electricity generated by the project activity. The details of meters such as make, Sr. No. calibration frequency etc. are provided in Appendix 5 of this report. The project is based on sectoral Scope 1: Energy Industries (renewable sources) with ACM0002: Consolidated Baseline Methodology for Grid-connected electricity generation from renewable sources, Version 12.1.0.

During the Current Monitoring Period from 13-December-2012 to 12-December-2018(First and last date included) the project activity has supplied 347,916.05 MWh of electricity, and thus contributing to the GHG reductions 330,047 tCO_{2e}.

2. VERIFICATION PROCESS

The registered VCS project is undergoing second verification and the approach adopted to ensure the quality of emission reductions is described in the following sub-sections.

2.1 Method and Criteria

The overall verification, from Contract Review to Verification Report & Opinion, was conducted using ESPL's internal procedures. The Project was verified against the latest requirements (VCS Standard Version 4.3/14/ and VCS Guidelines version 4.2) /15/ as applicable.

- The verification process consists of the following three phases;
- A document review of the VCS approved PD and VCS MR (described in Section 2.2)
- Site visit and follow up interviews with project stakeholders (described in Section 2.3 and 2.4)
- The resolution of outstanding issues and issuance of the final report and opinion. (Described in Section 2.5)

DOE's Sampling Approach: No sampling approach was required for undertaking the current verification since all monitored data was verified by the assessment team.

2.2 Document Review

The verification is performed primarily as a document review of the documents submitted at various stages of assessments. The review is performed by assessment team using dedicated protocols. The assessment team cross checks the information provided in the documents (PD, MR, validation report) and information from sources other than those used, if available, and also conducts independent background investigations. Earthood conducted a desk review as under;

- A review of the data and information presented to verify their completeness.
- A review of the monitoring plan, the monitoring methodology including applicable tool(s) and, where applicable, the applied standardized baseline, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures.
- An evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.

2.3 Interviews

Name of Persons/Designation	Affiliation	Topics discussed	Team Member
Mr. Ashish Verma	Ruchi Soya Industries Ltd.	Project Implementation, Management practices, Grievance mechanism, Data collection, data storage, QA/QC etc.	Dr. Atul Takarkhede

Name of Persons/Designation	Affiliation	Topics discussed	Team Member
		Project Implementation, Monitoring practices, JMR, Calibration requirements etc.	
Mr. Bibhusita Ghose	EKI Energy	GHG calculations, MR and ER preparation	

2.4 Site Inspections

Duration of on-site inspection: 01-September-2021				
No.	Activity performed on-site	Site location	Date	Team member
1.	Assessment team checked the implementation of the project, Baseline emission, Emission reduction calculation, technical description of the project and Monitoring. Assessment team also checked that whether the monitoring plan as described in the VCS PD/1/ is actually practised onsite. Also, assessment team checked any change in host country criteria which may affect the baseline of the project activity.	Piploda & Ratlam Taluk, Ratlam, Madhya Pradesh, and Fatehgarh & Shergarh district, Rajasthan State of India	01-September-2021	Dr. Atul Takarkhede

2.5 Resolution of Findings

The findings may be of the following types: CAR- Corrective Action Request, CL- Clarification Request and FAR- Forward Action Request.

The list of findings and their resolution are presented in Appendix 2 of this verification report. The section also includes the response, if provided, by the project participants and an assessment by the assessment team if it was closed or otherwise. It is to be noted that all the findings have been satisfactorily resolved by the assessment team.

A total of 05 CAR and 01 CL were raised in the current verification. All the findings that are raised and communicated to project participant during the verification are included under Appendix 2. The section also includes the response, if provided, by the project participants and an assessment by the verification team if it was closed out or otherwise

2.5.1 Forward Action Requests

This is 2nd periodic verification of the project activity and no FAR is raised during current verification and no FAR from validation/previous 1st verification as well.

2.6 Eligibility for Validation Activities

This section is not applicable for present verification, as ESPL holds the accreditation for Validation of projects for this Sectoral Scope.

VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

PP has submitted an undertaking regarding no participation in any other GHG mechanism except CDM. Hence, VVB confirms that PP is also register under UNFCCC CDM programme with ref. no. 8592 (33.6 MW out of 44.40 MW from this VCS 835 project) and 8818 (10.8 MW out of 44.40 MW from this VCS 835 project).

This VCS monitoring period 13-December-2012 to 12-December-2018 has been partially covered by UNFCCC CDM Verification period covering 31-December-2012 to 09-April-2015 for UN 8818 and 13-December-2012 to 31-August-2015 for UN 8592¹. The CERs have not been yet claimed for UN 8592 till date however, CERs are issued for UN 8818, and thus, PP had excluded the generation from Palsodi site WTGs (PR-01, PR-02, PR-03, PR-04, PR-05, PR-06, PR-08, PR-09, PR-10, PR-11, PR-12, PR-13, PR-14, PR-15, PR-16, PR-17, PR-18, PR-19 which are part of UN 8818 project also) for the period from 31-December-2012 to 09-April-2015 in current Monitoring Period. Further, if VCUs are issued for this monitoring period, the CERs cannot be claimed for the CDM project; UN 8592 for the MR webhosted for period 13-December-2012 to 31-August-2015. Assessment team checked the ER sheet and found that electricity generation values to the CDM registered WTG component excluded correctly. PP has given declaration that the project activity will not claim emission reductions for the monitoring period claimed in VCS and avoid double counting of the emission reductions/16/.

¹<https://cdm.unfccc.int/Projects/DB/RWTUV1355735181.12/view> & <https://cdm.unfccc.int/Projects/DB/RWTUV1354786640.92/view>

Verification team has also checked REC India registry and confirms that project activity is not availing any REC benefits².

VVB raised CAR 03 related to this which was closed successfully during verification.

3.2 Methodology Deviations

No methodology deviation is envisaged for present verification.

3.3 Project Description Deviations

No Project Description is envisaged for present verification.

3.4 Grouped Project

This is not a grouped project. Thus, this section is not applicable for the project activity.

VERIFICATION FINDINGS

4.1 Project Implementation Status

During the physical verification audit was concluded that the project is implemented as per the instruction of the registered VCS PD/1/, and this is verified from the commissioning certificates/10/. During the current monitoring period it was observed that no unforeseen situation evolved which can impact the operation of the project activity. Breakdown summary is submitted by PP for the wind power plant/21/. Scheduled maintenance was carried out as per the instruction of the manufacturer and the same is acceptable to the assessment team/9/.

The project activity by Ruchi Soya Industries Ltd. involves the generation of electricity through wind power plant with a combined capacity of 44.40 MW equipped with 44 WTGs with rated capacity of 600 kW each (model S-52) and 12 WTGs with rated capacity of 1500 kW each (model S-82) located in the state of Rajasthan and Madhya Pradesh of India/10/. There is no addition of any new project instance during this verification/1/,/2/inline with the VCS Standard Version 4.3/14/. The technical parameters/specification have been verified by the assessment team through site visit/09/ as well as the same is also verified with the details as provided by the manufacturer/18/. The details of WTGs & its commissioning /10/ along with site location are given below.

²<https://www.recregistryindia.nic.in/>

S. No.	Physical Location	Rated Capacity of the WTG (kW)	Location No.	Latitude	Longitude	Commissioning Date
1.	Village-Naulakha, Taluka- Piploda, District - Ratlam (Madhya Pradesh)	600	NL-1	23°38'23.0" N	74°59'12.7" E	27-March-2010
		600	NL-2	23°38'25.9" N	74°59'07.1" E	
		600	NL-3	23°38'37.3" N	74°59'13.1" E	
		600	NL-4	23°38'45.1" N	74°59'25.7" E	
		600	NL-5	23°38'35.9" N	74°59'33.3" E	
		600	NL-6	23°38'25.9" N	74°59'39.7" E	
		600	NL-7	23°38'17.1" N	74°59'39.4" E	
		600	NL-8	23°38'21.9" N	74°59'53.7" E	
		600	NL-9	23°38'33.5" N	75°00'00.2" E	
		600	NL-10	23°38'43.1" N	75°00'00.2" E	
2.	Village-Padliya Umat, Taluka- Piploda, District - Ratlam (Madhya Pradesh)	600	JO-10	23°35'51.6" N	75°04'44.1" E	30-March-2010
		600	JO-08	23°35'45.5" N	75°04'47.9" E	29-March-2011
3.	Village-Bargad, Taluka - Piploda, District Ratlam (Madhya Pradesh)	600	JO-12	23°36'10.3" N	75°04'30.3" E	30-March-2010
		600	JO-13	23°36'17.2" N	75°04'26.6" E	31-May-2010
4.	Village-Hariyakheda, Taluka- Piploda, District - Ratlam (Madhya Pradesh)	600	JO-14	23°36'23.7" N	75°04'24.3" E	29-March-2011
		600	JO-15	23°36'31.0" N	75°04'21.8" E	
		600	JO-16	23°36'37.7" N	75°04'20.8" E	
		600	JO-17	23°36'45.9" N	75°04'15.2" E	
		600	JO-18	23°36'59.3" N	75°04'12.6" E	
		600	JO-19	23°37'05.9" N	75°02'48.5" E	
5.	Village-Chourasi Badayla, Taluka- Piploda, District - Ratlam (Madhya Pradesh)	600	JO-03	23°34' 46.9" N	75°05'46.8"E	30-March-2011
		600	JO-04	23°34' 53.5" N	75°05'48.4"E	
		600	JO-05	23°34' 57.2" N	75°05'22.1"E	
6.	Village-Uperwada, Taluka- Piploda, District - Ratlam (Madhya Pradesh)	600	JO-20	23°36' 46.5" N	75°02'20.9"E	29-March-2011
		600	JO-21	23°36' 38.2" N	75°02'21.7"E	
		600	JO-22	23°36' 58.6" N	75°02'46.0"E	
7.	Village-Akal, Taluka- Fatehgarh, District-Jaisalmer (Rajasthan)	1500	AK-400	26°47'17.3" N	77°05'12.0"E	26-March-2010
		1500	AK-401	26°47'05.0" N	77°05'25.3"E	
		1500	AK-414	26°48'12.4" N	77°05'06.8"E	
		1500	AK-415	26°48'33.5" N	77°05'23.5"E	
		1500	AK-416	26°48'25.6" N	77°05'35.8"E	
		1500	AK-417	26°48'12.2" N	77°05'46.1"E	
		1500	AK-253	26°47'51.2" N	77°08'14.0"E	24-January-2011
		1500	AK-308	26°47'56.9" N	77°08'55.6"E	15-February-2011
8.	Villages-Belwa Ranaji & Sagat Nagar, Taluka-Shergarh, District-	1500	RKB-075	26°30'52.3" N	72°32'22.2"E	08-March-2010
		1500	RKB-076	26°30'05.7" N	72°31'06.4"E	

S. No.	Physical Location	Rated Capacity of the WTG (kW)	Location No.	Latitude	Longitude	Commissioning Date
	Jodhpur (Rajasthan)					
9.	Village-Dhundhariya, Taluka- Osian, District-Jodhpur (Rajasthan)	1500	OS-48	26°43'57.6" N	72°56'43.1"E	26-February-2010
		1500	OS-49	26°43'55.5" N	72°56'59.5"E	
10.	Village-Gopalpura, Taluka- Ratlam, District-Ratlam (Madhya Pradesh)	600	PR-01	23°23'26.4"N	74°55'27.1"E	30-March-2011
		600	PR-02	23°23'20.8"N	74°55'23.1"E	
		600	PR-03	23°23'14.9"N	74°55'13.4"E	
		600	PR-04	23°23'08.1"N	74°55'10.8"E	
		600	PR-05	23°23'01.5"N	74°55'07.9"E	
		600	PR-06	23°22'44.6"N	74°55'08.1"E	
		600	PR-08	23°22'29.6"N	74°55'14.0"E	
		600	PR-17	23°22'54.0"N	74°55'12.0"E	
		600	PR-19	23°23'18.0"N	74°55'36.6"E	
11.	Village-Rampuriya, Taluka- Ratlam, District-Ratlam (Madhya Pradesh)	600	PR-09	23°22'25.6"N	74°55'24.6"E	04-June-2011 17-June-2011 04-June-2011 17-June-2011 04-June-2011
		600	PR-10	23°21'59.1"N	74°55'34.4"E	
		600	PR-11	23°21'25.3"N	74°55'11.9"E	
		600	PR-12	23°21'34.5"N	74°55'30.8"E	
		600	PR-13	23°21'41.6"N	74°55'31.2"E	
		600	PR-14	23°21'47.8"N	74°55'32.0"E	
		600	PR-15	23°21'53.8"N	74°55'32.6"E	
		600	PR-16	23°21'28.2"N	74°55'29.2"E	
		600	PR-18	23°21'21.8"N	74°55'23.6"E	

The assessment team has done onsite visit with the PP representative in order to verify the status of the project implementation of the monitoring plan. It has also been verified as per the guidelines in ACM0002: Grid-connected electricity generation from renewable sources, Version 12.1.0 that the calculations for the GHG emission reductions are done in accordance with the aforesaid methodology /7/.

The assessment team also confirmed that the monitoring system for emission reduction calculation was in place and in accordance with the registered VCS PD/1/.

During the current monitoring duration, no events have been found that can change the design of project/9/. However, meter has been changed for better accuracy class from 0.5s to 0.2s in 2013

and 2019/4/ for few sites, details provided in appendix 5 of this report. Same is results in the better accuracy during monitoring of the electricity. The installation of better accuracy class monitoring meters do not have impact on the monitoring plan of the project activity/1/ and thus accepted by assessment team.

Capacity of the projects and date of commissioning verified with commissioning certificates/10/and technical specifications provided by technology supplier/18/.

During site visit, Geo coordinates were checked on the google earth/17/ and cross-checked with validation report & previous verification report/12/and verification team concluded that the geo coordinates of project locations are consistent with registered PD/1/.

Assessment team checked the technical details of the project activity from the manufactures specification and found correct/18/.

Assessment team concludes the following:

- a) The implementation status of project activity was found to be in compliance with registered PD/1/.
- b) DOE has conducted site visit to confirm the implementation status of the project/9/.
- c) The commissioning date of the project activity was found to be accurately and consistently recorded/10/.
- d) The actual operation of project activity was found to be in compliance with the flow diagram provided in registered PD/1/.
- e) The emission reductions achieved during the current monitoring period are 330,047 tCO₂e.

The project activity contributes to the sustainable development by utilising wind energy for generating electricity which otherwise would have been generated through fossil fuels. Thereby reduction in usage of non-renewable sources used to generate energy.

Further the GHG emission reductions generated by the project activity has not been included by any other an emissions trading program or any other mechanism that includes GHG allowance trading. Also, the project has not received any other form of environmental credit and has not been participated/rejected under any other GHG programs.

Sustainable Development- The project will contribute to the sustainable development in the following ways:

1. Environmental: Since the project activity leads to cleaner production of energy, it is leading to displacement of fossil fuel-based energy.
2. Social: Setting up of the project activity has created new job openings hence is supporting employment of the local people around.
3. Cleaner Air: Since the project activity leads to lesser GHG emission it results in better air quality

Further, inline with para 3.16.1, "The project proponent must demonstrate that a project contributes to at least three SDGs by the end of the first monitoring period, and in each subsequent monitoring period." As per the provision of implementation deadline, "Projects

registered before 20 January 2023 shall demonstrate contributions to at least three SDGs by 20 January 2025". Thus, PP does not provided SDG contributions made.

Further the project has been implemented as described in the Project Description/1/. CL 01, CAR 01, CAR 02 & CAR 03 were raised and same were resolved by revision in the MR. details are provided in Appendix 2 of this report.

The total emission reductions achieved in this monitoring period i.e., from 13-December-2012 to 12-December-2018 (including both days) are 330,047 tCO₂e.

4.2 Safeguards

4.2.1 No Net Harm

As PP does not see and identify any potential negative environmental and socio-economic impacts, hence this section is not required.

4.2.2 Local Stakeholder Consultation

Local stakeholder consultation has been conducted at the time of project registration hence not applicable in the current monitoring period. However, PP has kept a dedicated visitor cum grievance registers at the project sites which is accessible to stakeholders to provide their feedback on the project as an ongoing communication with local stakeholders. This is in compliance with the requirement of para 3.16.4 of VCS standard, Version 4.3. Assessment team has checked the grievances register and confirms that there are no any grievances received during the current monitoring period/23/.

4.3 AFOLU-Specific Safeguards

This is non AFOLU projects, hence this section not applicable.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

Means of verification	The verification team assessed whether the data and calculations of GHG emission reductions achieved resulting from the MR. 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 monitoring plan of the MR.
Findings	CAR 04 was raised during the verification process and closed successfully. Refer Appendix 2 of this report for the detail closure of the CAR.
Conclusion	Ex-ante Parameter: 1. $EF_{grid,OM,y}$: Operating margin CO₂ emission factor of NEWNE grid(now a part of Unified Indian Grid) This Parameter is fixed ex-ante for the entire crediting period and as per the validated PD same is fixed 0.9941 tCO₂/MWh for NEWNE grid. Verification team found same was used in the ER calculations.

	2. $EF_{grid,BM,y}$: Build margin CO₂ emission factor of NEWNE grid(now a part of Unified Indian Grid) This Parameter is fixed ex-ante for the entire crediting period and as per the validated PD same is fixed 0.8123 tCO₂/MWh for NEWNE grid. Verification team found same was used in the ER calculations. 3. $EF_{grid,CM,y}$: Combined margin CO₂ emission factor for NEWNE grid(now a part of Unified Indian Grid) connected power generation in year y calculated using the “Tool to calculate the emission factor for an electricity system”, version 01.1, EB 35. This Parameter is fixed ex-ante for the entire crediting period and as per the validated PD same is fixed 0.94865 tCO₂/MWh for NEWNE grid. Verification team found same was used in the ER calculations. Ex ante value of emission factor is taken from CEA database, Ver. 05. Verification team checked the EF value and found in consistent with registered PD/1/. Baseline Emissions: The baseline Emissions for a given year is calculated by multiplying the energy baseline with the grid emission factor. The grid in this case would be the ‘Indian Grid’ Formula Used: - $BE_y = EG_{PJ,y} * EF_{grid,CM,y}$ Where, $EG_{PJ,y}$= Net electricity supplied to grid in year y (MWh) $EF_{grid,CM,y}$= Baseline emission factor of the grid in the year y (tCO₂/MWh) Thus $BE_y = 330,047 \text{ tCO}_2\text{e (round down values)}$ Monitored Parameter: 1. EG_{export}: Electricity exported to the grid by the project activity in year y (MWh) This parameter is measured by the main meters. The meter readings are recorded and verified, once in a month, jointly by the representatives of respective state utility and the authorized representative of the SISL. Site operators also record main meters readings daily. Assessment team found 350,867.42 MWh value correct and inline with the JMR. Thus accepted. 2. EG_{import}: Electricity imported (consumed) by the project activity in year y (MWh) This parameter is measured by the main meters. The meter readings are recorded and verified, once in a month, jointly by the representatives of
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	respective state utility and the authorized representative of the SISL. Site operators also record main meters readings daily. Assessment team found 2,951.363 MWh value correct and inline with the JMR. Thus accepted. 3. $EG_{PJ,y}$: Net Electricity exported to grid by the project activity in year y This parameter is calculated as: $EG_{PJ,y} = EG_{\text{export}} - EG_{\text{import}}$ Assessment team found 347,916.05 MWh³ value correct and inline with the JMR and invoices. Thus accepted. The verification team has checked the entire monthly JMR reports/ credit report/06/ for net electricity generated & supplied to the grid and crosschecked same with the invoices/05/ raised by PP towards State Utilities for the monitoring period. All values are found correct/3/. All the parameters are monitored and recorded as per the monitoring plan in the MR/2/. However, PPs have apportioned the values for the first month of the monitoring period where date is not matching with JMR cycle. Apportioning found appropriate and conservative/3/. The verification team has crosschecked the revised emission reduction sheet and monitoring report data with the JMR sheet and invoice and found all the values are matching. PE_y = As per approved PD, para 35 of the large-scale methodology ACM0002 (Version 12.1.0), all renewable energy power generation project activities, emissions due to the use of fossil fuels for the backup generator can be neglected. As the project activity involved wind power project emissions (PE_y) are taken as zero/1/. Leakage: As per approved PD, para 35 of the large-scale methodology ACM0002 (Version 12.1.0), Leakage emissions are not considered for the project activity/1/.
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4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

Means of verification	The verification team checked the break down log for the monitoring period/21/. During the site visit and the feeder wise location of the wind plants is also checked. The metering arrangement is bi-directional energy meters (main and check) at the Switchyard/State Electricity Board (SEB) substation. These meters record parameters including electricity exported & imported/6/. Moreover, the meters are located at the HT side of the transformer and are of accuracy class of 0.2s & 0.5 for project activity applied for verification/9/. These electricity meters are being used by state electricity board for JMR (Joint Meter Reading)/credit note electricity generation statements. The Net
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³ This value excludes generation from the WTGs which are part of CDM registered project activity UN 8818 for which issuance already happened. Same have been also detailed out in ER sheet. Refer details in Section 3.1 above.

	electricity supplied to the grid is then calculated from export and import values. The net electricity exported to the grid is also cross checked from the invoices raised to respective state electricity board which is in line with Methodology requirement for large scale project activity/5/. The main meter reading is taken jointly on a fixed day of every month for the preceding month at the delivery point and signed by the representatives of state utility and O&M personnel/9/. In the event of failure of main meter, the check meter is used in monitoring the electricity data. The agency is experienced in the monitoring system and is managing O&M of numerous other wind farm projects. Verification team confirms the metering process by interviewing the O&M personnel and PP representatives during site visit and found the monitoring process is in line with approved PD/1/. Calibration of all the meters is done by state electricity board officials as per the industry standards/9/,/4/. The calibration is done once in a year as per calibration frequency in registered VCD PD/1/. However, during current monitoring period, delay in scheduled calibration thus error factor as per the accuracy class is deducted from export and added in import values in line with the provisions in paragraph 366(a) & (b) and appendix of CDM Validation and Verification standard for the project activities. The details of Calibration of the meters as confirmed from verification and during onsite audit and calibration details are mentioned in Appendix 5 of this report/4/. The assessment team checked the same and found correct/10/. The energy meter recording the export and import from the grid at substation is under the control and supervision of state electricity board officials. Similarly, O&M contractor is responsible for monitoring of the generation data at CMS/9/. PP representatives confirmed that the DGR data as well as JMR sheets and invoices will be kept for 2 years following the end of the crediting period/1/. During site visit and discussion with PP, assessment team confirm that the data will be kept for 2 years following the end of the crediting period/9/. The responsibilities and authorities of project management, data handling and recording, measurement methods and QA/QC procedure have been systematically established and formalized and the same was verified during the document review and by interviewing O&M personnel and checking of records/ log books maintained at site/9/.
Findings	CAR 05 was raised during the verification process and closed successfully. Refer Appendix 2 of this report for the detail closure of the CAR.
Conclusion	The assessment team confirms that the value of net electricity exported to the grid as used in emission reduction calculation is correct/3/. The verification team therefore is of the opinion that the project participant through the O&M agency is capable of implementing the monitoring plan in the context of the project activity. Interview with O&M personnel during physical verification audit also confirms that the operational and organizational chart as mentioned in MR is as per the site practice and thus assessment team confirms that the details are correct/9/. The break down log/21/ is checked and found that the wind panels undergone scheduled maintenance as per the guideline provided by the manufacturer which is acceptable to the assessment team. No unforeseen incident observed during the monitoring period which could alter the applicability of the

	methodology or change in project specification as mentioned in the registered PD/1/. The project undergone Continuous operation from the inception/commissioning and the same is confirmed from the JMR reports and invoices raised for the said period of verification PD/6/, /5/. Comparison of actual and estimate emission reductions achieved: Assessment team checked the calculation of estimated VER vs. Actual VER. As per the registered PD the amount of VERs annually is 81,853 tCO₂e/1/. The days involved in present monitoring period are 2,191. Therefore, on pro-rata basis, the estimated VERs for the monitoring period is 491,342 tCO₂e. However, as UN 8818 verification for the period 31-December-2012 to 09-April-2015(830 days) is already completed, estimated emission reduction of UN 8818 for the period has been subtracted(as all WTGs of UN 8818, are also registered in this VCS project). The annual net generation from UN 8818 project activity is 22,270.72 MWh. Taking Combined Margin Emission Factor as 0.94865 tCO₂e/MWh (which is combined margin emission factor of VCS 835 project as VCS 835 was registered separately), the estimated annual emission reduction for UN 8818 project is 21,127 tCO₂e. Therefore, on pro-rata basis estimated emission reduction for UN 8818 for the period 31-December-2012 to 09-April-2015 is 48,042 tCO₂e. Hence, estimated VERs for this VCS project activity for current Monitoring Period is = 491,342 tCO₂e - 48,042 tCO₂e = 443,300 tCO₂e. Actual VERs obtained for the monitoring period is 330,047 tCO₂e and thus the actual VER is 25.55% lower than the estimated VCU. This variation is majorly due to the variations of climatic conditions, grid availability and other parameters which are not in the control of PP/6/, /9/. Hence, verification team confirms that decrease in VER by 25.55% in this monitoring period is acceptable.
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4.6 Non-Permanence Risk Analysis

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	
NA	NA	NA	NA	NA

VERIFICATION CONCLUSION

Earthood Services Private Limited (Earthood), contracted by EKI Energy Services Limited, has performed the independent verification of the emission reductions for the VCS project activity reference number 835“44.40 MW Wind Energy Project by Ruchi Soya Industries Limited, India” in India for the monitoring period 13-December-2012 to 12-December-2018 (inclusive both days) reported in the Monitoring Report Version 04 dated 18-November-2022.

It is our responsibility to express an independent verification statement on the reported GHG emission reductions from the project activity.

Earthood commenced the verification on the basis of the baseline and monitoring methodology “ACM0002 - Version 12.1.0, the monitoring plan contained in the PD version 02 and VCS guidelines version 4.2, Monitoring Report Version 04 dated 18-November-2022 as per the process described under Section 2 of this report.

Earthood’s verification approach is based on the understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these. Earthood planned and performed the verification by obtaining evidence and other information and explanations that Earthood considered necessary to give reasonable assurance that reported GHG emission reductions are fairly stated.

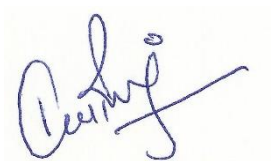
In our opinion the GHG emissions reductions reported for the project activity for the period 13-December-2012 to 12-December-2018 are fairly stated in the Monitoring Report Version 04 dated 18-November-2022. The GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology “ACM0002 - Version 12.1.0” and the VCS standard.

Verification period: 13-December-2012 to 12-December-2018 (inclusive of both days).

Verified GHG emission reductions and removals in the above verification period:

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
13-December-2012 to 31-December-2012	3308	0	0	3308
01-January 2013 to 31-December-2013	43953	0	0	43953
01-January 2014 to 31-December-2014	45488	0	0	45488
01-January 2015 to 31-December-2015	57474	0	0	57474
01-January 2016 to 31-December-2016	59902	0	0	59902
01-January 2017 to 31-December-2017	62221	0	0	62221
01-January 2018 to 12-December-2018	57701	0	0	57701
Total	330,047	0	0	330,047

Approved by



Dr. Kaviraj Singh

Managing Director

Earthood Services Privated Limited

Date: 28-November-2022

Place: Gurgaon, Haryana

APPENDIX 1: DOCUMENTS REVIEWED OR REFERENCED (VERIFICATION)

S.No	Title of Document	Version	Date
1.	Registered VCS PD	version 02	26-September-2011
2.	Initial VCS Monitoring Report Revised VCS Monitoring Report Revised VCS Monitoring Report Final VCS Monitoring Report	01 02 03 04	03-February-2022 22-July-2022 30-August-2022 18-November-2022
3.	ER spreadsheet (corresponding to the final monitoring report)	02	22-July-2022
4.	Certificates of calibration for all SPVs belongs to project activity	-	-
5.	Invoice issued by PP for the duration of monitoring period (13-December-2012 to 12-December-2018)	-	-
6.	Joint Meter Readings for the duration of monitoring period (13-December-2012 to 12-December-2018)	-	-
7.	ACM0002: Large-scale Consolidated Methodology: Grid-connected electricity generation from renewable sources	Version 12.1.0	-
8.	CO ₂ Baseline Database for the Indian Power Sector published by the Central Electricity Authority (CEA), Ministry of Power, Govt.	version 06	March-2011
9.	Onsite Visit	-	01-September-2021
10.	Commissioning certificates/Calibrations records for initial calibration of the meters installed during commissioning of the project activity	-	-
11.	Power Purchase Agreements for SPVs	-	-
12.	VCS webpage for the project, VCS ID 835; https://registry.terra.org/app/projectDetail/VCS/835	-	Last accessed on 06-August-2022
13.	O&M contract for all project sites	-	-
14.	VCS Standard	Version 4.3	Last accessed on 06-August-2022

S.No	Title of Document	Version	Date
15.	VCS Program Guide	Version 4.2	Last accessed on 06-August-2022
16.	Letter of declaration dated from PP regarding not having created or sought any other form of environmental credit for the same period and double counting	-	02-September-2021
17.	Google Earth desktop/Mobile application	-	Last accessed on 06-August-2022
18.	Technical specifications by technology supplier		
19.	Meter calibration guidelines: https://cea.nic.in/cdm-co2-baseline-database/?lang=en	-	-
20.	Verification report of the last monitoring period. Report Number 8110543939-11/439	1.0,	12-August-2016
21.	Break down log sheet of Plants	-	-
22.	Skill development training records	-	-
23.	Copies of the grievance registers maintained at sites	-	-

APPENDIX 2: CORRECTIVE ACTION REQUESTS, CLARIFICATION REQUESTS AND FORWARD ACTION REQUESTS (CAR/CL/FAR)

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

FAR ID	Section no.	Date : DD-Month-YYYY
Description of FAR		
There is no FAR from the validation of the project activity		
Project participant response		Date : DD-Month-YYYY
NA		
Documentation provided by project participant		
NA		
DOE assessment		Date: DD-Month-YYYY
NA		

Table 2. CL from this verification

CL ID	01	Section no.	Date : 01-September-2021
Description of CL			
Clarification requested for the Jaora-III feeder connected WTGs for complete monitoring period. Kindly clarify.			
Project participant response			Date : 22-July-2022
Jaora-III feeder WTG generation for complete monitoring period has been included and the same in mentioned in ER Sheet.			
Documentation provided by project participant			
Updated ER Sheet.			
DOE assessment			Date: 06-August-2022
Details of the WTGs connected to Jaora-III feeder are now clearly mentioned in ER sheet and found correct. CL thus closed.			

Table 3. CAR from this verification

CAR ID	01	Section no.	4.1	Date : 01-September-2021
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Description of CAR	
Following discrepancies observed during review of the MR:	
1. Section 1.1 and 3.1 of MR is not inline with the guidelines to complete VCS MR template version 4.0. Corrective action sought. 2. In section 2.1 of the MR, name of DNA/ Ministry found incorrect and also weblink for notification 2006 is missing. Corrective action sought. 3. Title of Annexure I is missing in MR. Corrective action sought.	
Project participant response	Date :22-July-2022
1. Section 1.1 and 3.1 has been corrected as per guidelines of VCS MR template version 4.0 in updated MR. 2. In Section 2.1 DNA/Ministry name has been corrected and weblink for notification 2006 has been provided in updated MR. 3. Title of Annexure I has been provided in updated MR	
Documentation provided by project participant	
Updated MR.	
DOE assessment	Date:06-August-2022
1. PP has revised Section 1.1 and 3.1 of monitoring report as per the template guidelines. Found correct thus accepted. 2. DNA name is rectified by PP in section 2.1 of revised monitoring report. Thus accepted 3. PP has rectified title of annexure under revised MR. found correct.	
CAR#01 is Closed.	

CAR ID	02	Section no.	4.1	Date :01-September-2021
Description of CAR				
PP requested to submit all relevant supporting documents like technical specifications, O&M agreements, break down details etc. for review by assessment team.				
Project participant response				Date :22-July-2022
Commissioning Certificate, Technical Specifications, Breakdown Details has been provided to DOE.				
Documentation provided by project participant				
1. Commissioning Certificate, Technical Specifications, Breakdown Details				
DOE assessment				Date:06-August-2022
Following documents has been submitted by PP to assessment team:				
1. Commissioning certificate of all site issued by their respective state authority. 2. Power Purchase Agreement between PP and respective DISCOM. 3. Technical Specification Document issued by OEM of Wind panels. 4. Breakdown details 5. training records for the onsite personnel				
Above all supporting documents found consistent with the revised MR. hence accepted and				
CAR#02 is closed.				

CAR ID	03	Section no.	4.1	Date :01-September-2021
Description of CAR				
PP requested to submit declaration in effect of avoiding double counting with regard to participation under other GHG Programs/Other forms credits, rejection under other GHG program etc. including specifically CDM project details and overlapping period for CDM MR webhosted/CERs issued for which WTGs of this project are part of CDM projects registered CDM 8818 & CDM 5892.				
Project participant response				Date :22-July-2022
PP has given undertaking regarding double counting about participation under other GHG Programs/Other forms credits, rejection under other GHG program and the CDM project activity names have been mentioned in declaration. Also, PP didn't count the emission reduction of overlapping period for current verification and is shown in ER Sheet.				

Documentation provided by project participant	
Declaration regarding Double Counting, Updated ER Sheet	
DOE assessment	Date:06-August-2022
PP has submitted Declaration related to No double counting of credits with regards to participation under GHG program credits except CDM program. Moreover, also declare that PP will not will not apply for credits for current monitoring period from other than VCS. Hence accepted and CAR#04 is closed.	

CAR ID	04	Section no.	4.4	Date :01-September-2021
Description of CAR				
PP requested to submit all supporting documents for calculation of net electricity generation supplied by the project activity along the copies of invoices for cross checking.				
Project participant response				Date :22-July-2022
JMR and invoices of current Monitoring Period has been submitted to DOE.				
Documentation provided by project participant				
JMR, Invoice of Monitoring Period				
DOE assessment				Date:06-August-2022
PP has submitted all relevant copies of JMR and Invoices to the assessment team. During Review, team found value of net electricity generated throughout MP in JMRs/invoice are consistent and conservatively calculated in the ER sheet. Hence accepted and CAR#06 is closed.				

CAR ID	05	Section no.	4.2.2	Date :01-September-2021
Description of CAR				
Details related to Monitoring equipment and its calibration is missing in the MR. Thus, PP is requested to provide the same and also to verify the same submit copies of calibration certificates relevant to the current monitoring period. Corrective action sought.				
Project participant response				Date :22-July-2022
Monitoring equipment and its calibration has been provided in Appendix I of updaters MR. Also copies of calibration certificates has been provided to assessment team.				
Documentation provided by project participant				
Updated MR, Calibration Certificates of Monitoring Meters				
DOE assessment				Date:06-August-2022
PP has now provided details related monitoring meters and its calibration in appendix -I of revised monitoring report. Moreover, also submitted copies of calibration certificates and meter change certificates also. Verification team verified the same and observed same is in line with calibration details provided in revised MR. Thus, accepted and CAR#05 is closed				

Table 4. FAR from this verification

FAR ID	XX	Section No.		Date :DD-Month-YYYY
Description of FAR				
There is no FAR from this verification				
Project participant response				Date :DD-Month-YYYY
NA				
Documentation provided by project participant				
NA				
DOE assessment				Date: DD-Month-YYYY
NA				

APPENDIX 3: COMPETENCE OF TEAM MEMBERS AND TECHNICAL REVIEWERS

Competence Statement			
Name	Atul Takarkhede		
Education	Ph.D. Environmental Science		
Experience	12 years		
Field	Climate Change and environment		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	NO		
Local expert	NO		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert	YES (1.2)		
Reviewed by	Shreya Garg	Date	24/04/2019
Approved by	Anshika Gupta	Date	25/04/2019

Competence Statement			
Name	Shreya Garg		
Country	India		
Education	M.Sc. (Climate Science & Policy), TERI University		
Experience	9 Years +		
Field	Climate Change		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS.I.A., AMS.I.C., AMS.I.D., AMS.I.F., AMS.II.D., AMS.II.G., AMS.II.J., AMS.III. AV., AMS. III. BL, ACM0002, ACM0012		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert	YES (TA 1.2, TA 3.1)		
Reviewed by	Shifali Guleria	Date	26/04/2022
Approved by	Deepika Mahala	Date	26/04/2022

APPENDIX 4: ABBREVIATIONS

Abbreviations	Full texts
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEA	Central Electricity Authority
CL	Clarification request
CM	Combined Margin
CMS	Central Monitoring system
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
EF	Emission Factor
EIA	Environmental Impact Assessment
ER	Emission Reductions
FAR	Forward Action Request
GHG	Greenhouse gas(es)
GWP	Global Warming potential
JdVVNL	Jodhpur Vidyut Vitran Nigam Limited
MPPKVCL	Madhya Pradesh State Pashchim Kshetra Vidyut Vitaran Company Limited
PP	Project Participant

APPENDIX 5: METER CALIBRATION DETAILS

Palsodi

WTG ID	Feeder	Meter No.	Meter Type	Make	Accuracy	Calibration Date	Validity of Calibration	Delay in Calibration ⁴
PR-11, 12, 16, 18	Palsodi Feeder-I	MPE15233	Main Meter	SEMS	0.5	04-June-2012	03-June-2013	25-February-2014 to 21-May-2014, 22-May-2015 to 19-February-2016, 20-February-2017 to 12-December-2018
		MPC49084 ⁵	Main Meter	SEMS	0.2	25-February-2013, 22-May-2014, 20-February-2016	24-February-2014, 21-May-2015, 19-February-2017	
		XE479853 ⁶	Main Meter	Secure	0.2	31-May-2019	30-May-2020	
		MPE15232	Check Meter	SEMS	0.5	04-June-2012	03-June-2013	25-February-2014 to 19-February-2016, 20-February-2017 to 21-February-2018.
		3596373 ⁷	Check Meter	Genus Power	0.5	25-February-2013, 20-February-2016, 22-February-2018	24-February-2014, 19-February-2017, 21-February-2019	
PR-01 to 06, PR-17, 19	Palsodi Feeder-II	MPE20352	Main Meter	SEMS	0.5	04-June-2012	03-June-2013	25-February-2014 to 21-May-2014, 22-May-2015 to 19-February-2016, 20-February-2017 to 12-December-2018
		MPC49087 ⁸	Main Meter	Secure	0.2	25-February-2013, 22-May-2014, 20-February-2016	24-February-2014, 21-May-2015, 19-February-2017	
		XE479854 ⁹	Main Meter	Secure	0.2	31-May-2019	30-May-2020,	
		MPE20353	Check Meter	SEMS	0.5	04-June-2012	03-June-2013	25-February-2014 to 19-

⁴ Error Factor has been applied where delay in calibration occurred.

⁵ Meter No. MPE15233 was replaced by Meter No. MPC49084 on 25-February-2013.

⁶ Meter No. MPC49084 was replaced by Meter No. XE479853 on 31-May-2019

⁷ Meter No. MPE15232 was replaced by Meter No. 3596373 on 25-February-2013.

⁸ Meter No. MPE20352 was replaced by Meter No. MPC49087 on 25-February-2013.

⁹ Meter no. MPC49087 was replaced by Meter No. XE479854 on 31-May-2019.

WTG ID	Feeder	Meter No.	Meter Type	Make	Accuracy	Calibration Date	Validity of Calibration	Delay in Calibration ⁴
		3596486 ¹⁰	Check Meter	Genus Power	0.5	25-February-2013, 20-February-2016, 22-February-2018	24-February-2014, 19-February-2017, 21-February-2019	February-2016, 20-February-2017 to 21-February-2018.
PR-08, 09, 10, 13, 14, 15	Palsodi Feeder-III	MPE57983	Main Meter	SEMS	0.5	04-June-2012	03/06/2013	25-February-2014 to 21-May-2014, 22-May-2015 to 19-February-2016, 20-February-2017 to 12-December-2018
		MPC49086 ¹¹	Main Meter	SEMS	0.2	25-February-2013, 22-May-2014, 20-February-2016	24-February-2014, 21-May-2015, 19-February-2017	
		XE479855 ¹²	Main Meter	Secure	0.2	03-September-2020	02-September-2021	
		MPE57984	Check Meter	SEMS	0.5	04-June-2012	03-June-2013	25-February-2014 to 19-February-2016, 20-February-2017 to 21-February-2018.
		3596488 ¹³	Check Meter	Genus Power	0.5	25-February-2013, 20-February-2016, 22-February-2018	24-February-2014, 19-February-2017, 21-February-2019	

Rajasthan (Osian, Akal & RKB)

WTG ID	Feeder	Meter No.	Meter Type	Make	Accuracy	Calibration Date	Validity of Calibration	Delay in Calibration ¹⁴
OS-48, OS-49	Phase-127	RJB074503	Main Meter	Secure	0.2	27-February-2018	26-February-2019,	13-December-2012 to 26-February-2018

¹⁰ Meter No. MPE20353 was replaced by Meter No. 3596486 on 25-February-2013.

¹¹ Meter No. MPE57983 was replaced by Meter No. MPC49086 on 25-February-2013.

¹² Meter No. MPC49086 was replaced by Meter No. XE479855 on 31-May-2019.

¹³ Meter No. MPE57984 was replaced by Meter No. 3596488 on 25-February-2013.

¹⁴ Error Factor has been applied where delay in calibration occurred.

WTG ID	Feeder	Meter No.	Meter Type	Make	Accuracy	Calibration Date	Validity of Calibration	Delay in Calibration ¹⁴
		RJB074504	Back up Meter	Secure	0.2	27-February-2018	26-February-2019,	13-December-2012 to 26-February-2018
AK-400, AK-401, AK-414, AK-415, AK-416, Ak-417, AK-253, AK-308	Phase-81	MSB10311	Main Meter	Secure	0.2	15-March-2012	14-March-2013	15-March-2013 to 17-July-2017
		RJB90208 ¹⁵	Main Meter	Secure	0.2	18-July-2017, 20-April-2018	19-April-2019	
		MSB10312	Back up Meter	Secure	0.2	15-March-2012	14-March-2013	15-March-2013 to 17-July-2017
		RJB90209 ¹⁶	Back up Meter	Secure	0.2	18-July-2017, 20-April-2018	19-April-2019	
RKB	Tinwari Feeder No. 1	RJB00320	Main Meter		0.2	27-April-2010	26-April-2011	27-April-2011 to 23-April-2017, 24-April-2018 to 12-December-2018
		RJB90216 ¹⁷	Main Meter	Secure	0.2	24-April-2017, 25-April-2019	23-April-2018, 24-April-2020	
		RJB00319	Back up Meter		0.2	27-April-2010	26-April-2011	27-April-2011 to 23-April-2017, 24-April-2018 to 12-December-2018
		RJB90217 ¹⁸	Back up Meter	Secure	0.2	24-April-2017, 25-April-2019	23-April-2018, 24-April-2020	

Jaora

¹⁵ Meter No. MSB10311 was replaced by Meter No. RJB90208 on 18-July-2017.

¹⁶ Meter No. MSB10312 was replaced by Meter No. RJB90209 on 18-July-2017.

¹⁷ Meter no. RJB00320 was replaced by RJB90216 on 24-April-2017.

¹⁸ Meter no. RJB00319 was replaced by RJB90217 on 24-April-2017.

WTG ID	Feeder	Meter No.	Meter Type	Make	Accuracy	Calibration Date	Validity of Calibration	Delay in Calibration ¹⁹
NL-01-10, JO-10, 12, 19, JO-13,14, 15	Feeder-III	34413	Main Meter	SEMS	0.5	17-November-2012	16-November-2013	17-November-2013 to 24-August-2015, 25-August-2016 to 12-December-2018.
		MPC49089 ²⁰	Main Meter	SEMS	0.2	25-August-2015	24-August-2016	
		XE479856 ²¹	Main Meter	Secure	0.2	01-June-2019	31-May-2020	
		34412	Check Meter	SEMS	0.5	17-November-2012	16-November-2013	17-November-2013 to 12-December-2018
		Q0306209 ²²	Check Meter	Secure	0.2	01-June-2019	31-May-2020	
JO-03 to 05, JO-08, JO-16 to 18, JO-20 to 22	Feeder-IV	3475859	Main Meter	SEMS	0.5	17-November-2012	16-November-2013	17-November-2013 to 05-May-2014, 06-May-2015 to 29-February-2016, 01-March-2017 to 05-October-2018
		MPC49082 ²³	Main Meter	SEMS	0.2	06-May-2014, 01-March-2016, 06-October-2018	05-May-2015, 28-February-2017, 05-October-2019	
		3475860	Check Meter	SEMS	0.5	17-November-2012	16-November-2013	15-November-2014 to 31-May-2019
		Q0306205 ²⁴	Check Meter	Secure	0.2	01-June-2019	31-May-2020	

¹⁹ Error Factor has been applied where delay in calibration occurred.

²⁰ Meter No. 34413 was replaced by Meter No. MPC49089 on 24-March-2013.

²¹ Meter No. MPC49089 was replaced by Meter No. XE479856 on 01-June-2019.

²² Meter No. 34412 was replaced by Meter No. Q0306209 on 01-June-2019.

²³ Meter No.3475859 was replaced by Meter No. MPC49082 on 24-March-2013.

²⁴ Meter No. 3475860 was replaced by Meter No. Q0306205 on 01-June-2019.