



Renewable Solar Power Project by ReNew Solar Power Private Limited



Document Prepared By Earthood Services Private Limited

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Summary:

The project activity involves the generation of electricity through a greenfield solar energy plant with a capacity of 927 MW in Gujarat, Karnataka, Madhya Pradesh, Rajasthan and Telangana states of India that supply the generated electricity to the National power grid.

The project has aimed to reduce the dependence on fossil fuel-powered power plants by substituting carbon-intensive energy with the inexhaustible and clean solar 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 26-October-2018 to 24-December-2019 (First and last date included) the project activity has supplied 2,147,933.02 MWh of electricity, and thus contributing to the GHG reductions 2,034,985 tCO₂e.

EKI Energy Services Limited contracted **ESPL** to conduct the verification of the project “**Renewable Solar Power Project by ReNew Solar Power Private Limited**”. The scope of verification includes

confirming the implementation of the monitoring plan in the registered project activity “Renewable Solar Power Project by ReNew Solar Power Private Limited (VCS ID – 1851) VCS PD (Ver. 02 dated 29-Jan-2019) and the application of methodology ACM0002: Grid-connected electricity generation from renewable sources¹ - Version 19.0

The verification consisted of three phases: a. Desk review of the project; b. Remote 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 total of 03 CL and 03 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.

¹<http://cdm.unfccc.int/methodologies/DB/VJI9AX539D9MLOPXN2AY9UR1N4IYGD>

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1 INTRODUCTION

1.1 Objective

“**EKI Energy Services Limited** has contracted ESPL (Hereinafter referred as Earthood) to conduct the verification of the project activity “Renewable Solar Power Project by ReNew Solar Power Private Limited” according to the requirements of the Verified Carbon Standard version 4.0.

The objective of this verification is to verify and certify emission reductions reported for the PA “Renewable Solar Power Project by ReNew Solar Power Private Limited” for the period 26-Oct-2018 to 24-Dec-2019 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: Grid-connected electricity generation from renewable sources² - Version 19.0 .

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

1.2 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

²<http://cdm.unfccc.int/methodologies/DB/VJI9AX539D9MLOPXN2AY9UR1N4IYGD>

documentary evidences were checked, and remote audit was conducted 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: Grid-connected electricity generation from renewable sources³ - Version 19.0 and the VCS standard, Ver. 4.0

1.3 Summary Description of the Project

Grid-connected solar power project in Gujarat, Karnataka, Madhya Pradesh, Rajasthan and Telangana states of India generates renewable solar electricity and supplies power to the Indian power grid. The current monitoring period from 26-Oct-2018 to 24-Dec-2019 (First and last date included) involved the generation and supply of 2,147,933.02 MWh solar power from plants located in Gujarat, Karnataka, Madhya Pradesh, Rajasthan and Telangana states of India. The power generated by the grid, replacing an equivalent amount of electricity from the grid system of India which is majorly dependent on fossil-fuel based grid imports for its electricity requirements.

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.

The main purpose of this project activity is to generate clean form of electricity through renewable solar energy source and Sale to State Utility. The project activity involves installation of 927 MW solar power project in Gujarat, Karnataka, Madhya Pradesh, Rajasthan and Telangana states of India.

Verification team confirmed the capacity by verifying commissioning certificates/10/ and also verified through interview with O & M personnel during the remote audit on skype and confirmed that solar power plant is operational in Gujarat, Karnataka, Madhya Pradesh, Rajasthan, Telangana states of India. The same was also verified through google map/17/. The start date of operation of the project activity is 13-Feb-2017, which is date of the commissioning/10/ of 24 MW solar project activity by Renew Mega Solar Power Project Private Limited of the project activity. The technical specification of all solar PV panels of all locations from supplier and details as confirmed during remote audit provided in Sec.4.1 of this report.

Project includes solar PV panels interfacing the generators with the State Electricity Board by setting up HT transmission lines and installation of other accessories. Technical specification of the plants as verified for all the locations and details provided in sec. 4.1 of this report.

The electricity meters are of the make L&T with a precision of 0.2s. The SCADA system allows the solar power system to be manually or automatically controlled and monitored/19/. The project is based on sectoral Scope 1: Energy Industries (renewable sources) with ACM0002: Grid-connected electricity generation from renewable sources⁴ - Version 19.0

During the Current Monitoring Period from 26-Oct-2018 to 24-Dec-2019 (First and last date included) the project activity has supplied 2,147,933.02 MWh of electricity, and thus contributing to the GHG reductions 2,034,985 tCO₂e

³<http://cdm.unfccc.int/methodologies/DB/VJI9AX539D9MLOPXN2AY9UR1N4IYGD>

⁴<http://cdm.unfccc.int/methodologies/DB/VJI9AX539D9MLOPXN2AY9UR1N4IYGD>

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 (Version 4.0) /14/ and guidance set out in VCS Standards as applicable.

- The verification process consists of the following three phases;
- A document review of the VCS PD and VCS MR (described in Section 2.2)
- Remote Audit 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)

VVB 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 (PDD/1/, MR/2/, validation report) and information from sources other than those used, if available, and also conducts independent background investigations. The Verification team has conducted a desk review as under;

- a) A review of the data and information presented to verify their completeness.
- b) 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.
- c) 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

A remote audit was conducted for the project activity on 13-July-2020. No sampling procedures were adopted. Remote audit was conducted due to pandemic situation and technical details and

metering/monitoring systems verified through site photographs/nameplates/9/ and calibration certificates/4/ shared by PP. All documents were crosschecked to ensure conservative estimation of emission reduction. The names of the persons interviewed (during remote audit through Skype/9/is given below;

S.N	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Agrawal	Ishu	PP Representative	13-July-2020	Implementation of the project and emission reduction calculations	Mr. Pankaj Kumar
2.	Das	Kingshuk	Consultant	13-July-2020		
3.	Sharma	Barun	Consultant	13-July-2020		
4.	-	Venkatesh	Farmer	13-July-2020	Local stake holder consultation	Mr. Pankaj Kumar
5.	Reddy	Ila	Teacher	13-July-2020		

During the remote audit, the PP representatives/ O & M personal were questioned about the implementation of the project activity. Several topics like the verification of commissioning date of meters, the generation, recording, and monitoring of the data and the error accountability were discussed. Various documents like the JMR sheets/6/, invoices/5/, on-site Photographs includes solar PV panelsnameplates, meter specifications, key technical specifications of the major equipment like panel etc. provided to assessment team were verified on skype video call to establish the current status and the implementation of the Project Activity. Refer Sec 2.4 for details.

2.4 Site Inspections

The verification team could not perform on-site inspection due to the ongoing COVID-19 pandemic taking into account the rules of relevant national and local authorities (local to the DOE offices as well as to locality of the site visits), World Health Organization (WHO) recommendations, policies of the DOE and other relevant travel restrictions and guidance (for example, a requirement to self-isolate upon return),

Ministry of Home Affairs, Government of India has order nationwide lockdown from 25-March-2020 to 14-April-2020/21/, further extended to 03-May-2020/22/and again extended up 17-May-2020/23/. The MHA further extended the lockdown till 30-May-2020/24/and 30-June-2020/25/. However now domestic travel, passenger movement by trains, interstate buses for public transport, movement by individuals started but still due to health advisory and location specific quarantine restrictions, travel not suggested. As access to project site and sub-station was restricted, video call was also not possible from sub-station. PP clarified that they do not have any person deputed at site as access to site is denied. Furthermore, the VCS program does not explicitly mandate site visits as part of the validation and verification process during such unprecedented circumstances, only that VVBs must achieve a reasonable level of assurance on all validations and verifications (per section 4.1.2 of the VCS Standard, v4.0. DOE has taken alternative measures to reach reasonable level of assurance and conducted remote audit through skype/9/and telephone with the site personal & consultant (refer section 2.3) to check the project design, implementation and monitoring of the project activity.

During interview, the implementation of project activity and monitoring procedure and systems in place was confirmed. Technical specification of the plant was verified through the onsite photographs/solar PV panels/9/shared by PP and the same was cross checked with . Further, assessment team has also checked through interviewing O&M personal and confirmed that the monitoring plan as described in the VCS PDD is actually practiced onsite.

After skype video call with O & M personals and verifying the photographs of solar PV panels, Single Line diagram of monitoring arrangement, and calibration certificates of meters , verification team confirmed that monitoring procedure is followed as per registered VCS PDD and there is no change in technical specifications/18/ of plants since installation and all the meters are calibrated/19/ in accordance with registered VCS PDD and host country metering guidelines.

A remote audit was conducted by the assessment team (Mr. Pankaj Kumar) on 13-July-2020 to carry out the following;

- a. An assessment of the implementation and operation of the registered project activity as per the registered PD or any approved revised PD/1/ and MR/2/;
- b. A review of information flow for generating, aggregating and reporting the monitoring parameters;
- c. Interviews with relevant personnel to determine whether the operational and data collection procedures are implemented in accordance with the monitoring plan in the PD;
- d. A cross-check between information provided in the monitoring report/02/ and data from other sources such as JMR sheets/06/, invoice slips/05/, PPA agreement/11/ etc.;
- e. A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the PD/1/ the applied methodology including applicable tool(s), and, where applicable, the applied standardized baseline;
- f. A review of calculations and assumptions made in determining the GHG data and emission reductions;
- g. An identification of quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters.

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 II 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 03 CAR and 03 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 previous verification as well.

2.6 Eligibility for Validation Activities

As project is already validated and this is 2nd verification of the project. Hence, this section not applicable.

3 VALIDATION FINDINGS

As project is already validated and this is 2nd verification of the project. Hence, this section not applicable.

3.1 Participation under Other GHG Programs

This section is not applicable for present verification. VVB has checked the Letter of Declaration dated 08/12/2020 from PP regarding not created or sought any other form of environment credit for the same period and double counting. /16/

3.2 Methodology Deviations

No methodology deviation is envisaged for present verification.

3.3 Project Description Deviations

Not applicable as no deviation in project description observed during this monitoring period.

3.4 Grouped Project

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

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

During the remote audit it was concluded that the project is implemented as per the instruction of the registered PD/1/, Final Validation report and 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 solar power plants. Scheduled maintenance was carried out as per the instruction of the manufacturer and the same is acceptable to the assessment team/9/.

The total installed capacity of the project is 927 MW which involves solar PV panels located at Gujarat, Karnataka, Madhya Pradesh, Rajasthan and Telangana states in India. The technical parameters have been verified with the nameplates as well as the technical specifications of solar PV panels./18/

The assessment team took the skype meeting of the solar power plant sites 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 sources⁵ - Version 19.0 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/. There was no deviation observed by the assessment team in the implementation of the monitoring system form the registered VCS PD during the current monitoring period/1/.

During the current monitoring duration, no events have been found that can change the design of project.

The details of the project location are mentioned in the table below:

Name of SPVs	Capacity (MW)	Village(s)	Tehsil / Mandal	District	State
Bhumi Prakash Private Limited	20 MW	Hirebudur	Deodurga	Raichur	Karnataka
Renew Wind Energy (MP Four) Private Limited	20 MW	Chincholi	Chincholi	Kalaburagi	
Renew Agni Power Private Limited	20 MW	Upparhosahalli	Siruguppa	Ballari	
Renew Wind Energy (Karnataka 3) Private Limited	20 MW	Ladha	Bhalki	Bidar	
Tarun Kiran Bhoomi Private Limited	20 MW	Gola (B)	Aland	Kalaburagi	
Renew Wind Energy (Karnataka 4) Private Limited	20 MW	Nirna	Humnabad	Bidar	
Renew Wind Energy (Budh 3) Private Limited	20 MW	Santhpur near Eklara	Aurad	Bidar	

⁵<http://cdm.unfccc.int/methodologies/DB/VJI9AX539D9MLOPXN2AY9UR1N4IYGD>

Renew Wind Energy (Budh 3) Private Limited	20 MW	Nirna	Humnabad	Bidar	
Renew Wind Energy (Budh 3) Private Limited	20 MW	Wadagere&Aikur	Shahapur	Yadagir	
Renew Wind Energy (Maharashtra) Private Limited	20 MW	Saidapur&Malhar	Yadagir	Yadagir	
Renew Wind Energy (Rajasthan Four) Private Limited	20 MW	Gundikaval	Turuvekere	Tumkur	
Renew Wind Energy (MP Three) Private Limited	20 MW	Kattige	Honnali	Davangere	
Renew Saur Urja Private Limited	50 MW	Thalekhan	Lingasugur		
Renew Wind Energy (TN2) Private Limited	50 MW	Thirumani, Rayacherlu, Vallur, Balasamudra, Kyataganacherlu	NagalamadikeHobli, Pavagada	Tumkur	
Renew Solar Energy (Karnataka Two) Private Limited	40 MW	Charanka	Santalpur	Patan	Gujarat
Renew Clean Energy Private Limited	51 MW	Bhensarwas	Shadora	Ashok Nagar	Madhya Pradesh
AalokSolarfarms Limited	10 MW	Badisid	Bap	Jodhpur	Rajasthan
AbhaSolarfarms Limited	10 MW	Badisid	Bap	Jodhpur	
HerambaRenewbles Limited	20 MW	Hanawat Nagar	Bap	Jodhpur	
ShreyasSolarfarms Limited	20 MW	Khetusar Nagar	Bap	Jodhpur	

ReNew Solar Energy (Telangana) Private Limited	143 MW	Dharamaraopet&Kankal	Sadasivanagar	Nizamabad	Telangana
Renew Mega Solar Power Pvt Limited	48 MW	Andugulapet	Mandamarri	Adilabad	
Renew Saur Shakti Private Limited	30 MW	Vangara	Bheemdevarapally	Karimnagar	
Renew Saur Shakti Private Limited	65 MW	Minpur	-	Medak	
Renew Wind Energy (TN2) Private Limited	100 MW	Gudibanda	Addakal	Mahabubnagar	
PrathameshSolarfarms Limited	50 MW	Dodaguntapally	Peddamandadi	Mahabubnagar	

The Geo-coordinates of the project site is mentioned below:

Name of SPVs	Capacity (MW)	Latitude	Longitude
Bhumi Prakash Private Limited	20 MW	16.3° N	76.8° E
Renew Wind Energy (MP Four) Private Limited	20 MW	17.4° N	77.4° E
Renew Agni Power Private Limited	20 MW	15.5° N	76.9° E
Renew Wind Energy (Karnataka 3) Private Limited	20 MW	18° 0'5.81"N	77° 18'32.57"E
Tarun Kiran Bhoomi Private Limited	20 MW	17.4° N	76.7° E
Renew Wind Energy (Karnataka 4) Private Limited	20 MW	17.7° N	77.3° E
Renew Wind Energy (Budh 3) Private Limited	20 MW	18° 11'47.91"N	77° 26'46.34"E
Renew Wind Energy (Budh 3) Private Limited	20 MW	17.75° N	77.35° E
Renew Wind Energy (Budh 3) Private Limited	20 MW	16.6° N	77.0° E
Renew Wind Energy (Maharashtra) Private Limited	20 MW	16.6° N	77.3° E
Renew Wind Energy (Rajasthan Four) Private Limited	20 MW	13.2° N	76.8° E
Renew Wind Energy (MP Three) Private Limited	20 MW	14.3° N	75.6° E
Renew Saur Urja Private Limited	50 MW	15° 53'53" N	76° 33'26" E
Renew Wind Energy (TN2) Private Limited	50 MW	14.237 N	77.486 E

Renew Solar Energy (Karnataka Two) Private Limited	40 MW	23°54'56.45" N	71°12'4.79" E
Renew Clean Energy Private Limited	51 MW	24.03117° N	76.667943° E
AalokSolarfarms Limited	10 MW	27.4° N	72.4° E
AbhaSolarfarms Limited	10 MW	27.4° N	72.4° E
HerambaRenewbles Limited	20 MW	27.4° N	72.1° E
ShreyasSolarfarms Limited	20 MW	27.3° N	71.9° E
ReNew Solar Energy (Telangana) Private Limited	143 MW	N 18.6°	E 78.3°
Renew Mega Solar Power Pvt Limited	48 MW	N 18.985290°	E 79.446397°
Renew Saur Shakti Private Limited	30 MW	18.1° N	79.4° E
Renew Saur Shakti Private Limited	65 MW	17° 57.951' N	78° 03.968' E
Renew Wind Energy (TN2) Private Limited	100 MW	16.6° N	77.9° E
PrathameshSolarfarms Limited	50 MW	16°25'12" N	78°4'40.80" E

The assessment team conducted a remote audit through skype video call with the PP in order to verify the status of the project implementation of the monitoring plan. VVB has confirmed all the implementation details of the project by plant's photograph and line diagram, send by PP. It has also been verified as per the guidelines in ACM0002: Grid-connected electricity generation from renewable sources - Version 19.0 that the calculations for the GHG emission reductions are done in accordance with the aforesaid methodology/7/. Scheduled and preventive maintenance were carried out as per manufacturer specification for the power plants, Hence no major break down.. during the monitoring period which might affect the applicability of methodology or might cause material errors in emission reductions. The assessment team also confirmed that the monitoring system for emission reduction calculation was in place and in accordance with the registered VCS PD.

Geo coordinates checked on google earth/17/ and verification team conclude geo coordinates of project locations are consistent with VCS PD (Refer Section 3).

Assessment team checked the technical details of the project activity from the manufactures specification and the detail are as follow

The technical details of the project activity are provided below.

The technical specification for 20 MW solar project by Bhumi Prakash Private Limited at Karnataka.

Sl. No.	Technical details of the equipment⁶	Description
1	Modules capacity and No. of Module	Model capacity- 320 Wp, 325 Wp No. of Modules- 21, 21
2	Number of Inverters & Capacity	20 Inverters Capacity- 1 MW
3	Number of Transformers & Capacity	5 transformer of 4 MVA 1 transformer of 15/20 MVA

The technical specification for 20 MW solar project by Renew Wind Energy (MP Four) Private Limited at Karnataka.

Sl. No.	Technical details of the equipment⁷	Description
1	Modules capacity and No. of Module	Model capacity- 320 Wp No. of Modules- 21
2	Number of Inverters & Capacity	20 Inverters Capacity- 1 MW
3	Number of Transformers & Capacity	5 transformer of 4 MVA 1 transformer of 16/20 MVA

The technical specification for 20 MW solar project by Renew Agni Power Private Limited at Karnataka.

Sl. No.	Technical details of the equipment⁸	Description
1	Modules capacity and No. of Module	Model capacity- 315 Wp, 320 Wp & 325 Wp No. of Modules- 21, 21, 21
2	Number of Inverters & Capacity	465 Inverters Capacity- 0.043 MW
3	Number of Transformers & Capacity	5 transformer of 4 MVA 1 transformer of 16/20 MVA

The technical specification for 20 MW solar project by Renew Wind Energy (Karnataka 3) Private Limited at Karnataka.

⁶It is to be noted that in future there is possibility of change in module configuration, however project capacity in total will remain same as 20 MW.

⁷It is to be noted that in future there is possibility of change in module configuration, however project capacity in total will remain same as 20 MW.

⁸It is to be noted that in future there is possibility of change in module configuration, however project capacity in total will remain same as 20 MW.

Sl. No.	Technical details of the equipment ⁹	Description
1	Modules capacity and No. of Module	Model capacity- 315 Wp, 320 Wp & 325 Wp No. of Modules- 21, 21, 21
2	Number of Inverters & Capacity	20 Inverters Capacity- 1 MW
3	Number of Transformers & Capacity	5 transformer of 4 MVA 1 transformer of 16/20 MVA

The technical specification for 20 MW solar project by Tarun Kiran Bhoomi Private Limited at Karnataka.

Sl. No.	Technical details of the equipment	Description
1	Modules capacity and No. of Module	Model capacity- 315 Wp, 320 Wp No. of Modules- 21, 21
2	Number of Inverters & Capacity	8 Inverters Capacity- 2.5 MW
3	Number of Transformers & Capacity	4 transformer of 5 MVA 1 transformer of 16/20 MVA

The technical specification for 20 MW solar project by Renew Wind Energy (Karnataka 4) Private Limited at Karnataka.

Sl. No.	Technical details of the equipment	Description
1	Modules capacity and No. of Module	Model capacity- 315 Wp, 320 Wp & 325 Wp No. of Modules- 20, 20, 20
2	Number of Inverters & Capacity	20 Inverters Capacity- 1 MW
3	Number of Transformers & Capacity	5 transformer of 4 MVA 1 transformer of 16/20 MVA

The technical specification for 20 MW solar project by Renew Wind Energy (Budh 3) Private Limited at Eklara site in Karnataka.

Sl. No.	Technical details of the equipment	Description
1	Modules capacity and No. of Module	Model capacity- 320 Wp, 325 Wp & 330 Wp No. of Modules- 20, 20, 20
2	Number of Inverters & Capacity	8 Inverters Capacity- 2.52 MW
3	Number of Transformers & Capacity	5 transformer of 4 MVA 1 transformer of 16/20 MVA

The technical specification for 20 MW solar project by Renew Wind Energy (Budh 3) Private Limited at Nirna site in Karnataka.

⁹It is to be noted that in future there is possibility of change in module configuration, however project capacity in total will remain same as 20 MW.

Sl. No.	Technical details of the equipment	Description
1	Modules capacity and No. of Module	Model capacity- 325 Wp& 330Wp No. of Modules- 20,20
2	Number of Inverters & Capacity	8 Inverters Capacity- 2.52 MW
3	Number of Transformers & Capacity	4 transformer of 5 MVA 1 transformer of 15/20 MVA

The technical specification for 20 MW solar project by Renew Wind Energy (Budh 3) Private Limited at Wadagere site in Karnataka.

Sl. No.	Technical details of the equipment	Description
1	Modules capacity and No. of Module	Model capacity- 320 Wp, 325 Wp& 330Wp No. of Modules- 20,20,20
2	Number of Inverters & Capacity	30 Inverters Capacity- 0.68 MW
3	Number of Transformers & Capacity	4 transformer of 5 MVA 1 transformer of 15/20 MVA

The technical specification for 20 MW solar project by Renew Wind Energy (Maharashtra) Private Limited at Karnataka.

Sl. No.	Technical details of the equipment	Description
1	Modules capacity and No. of Module	Model capacity- 315 Wp, 320 Wp& 325Wp No. of Modules- 21,21,21
2	Number of Inverters & Capacity	30 Inverters Capacity- 0.68 MW
3	Number of Transformers & Capacity	5 transformer of 4 MVA 1 transformer of 15/20 MVA

The technical specification for 20 MW solar project by Renew Wind Energy (Rajasthan Four) Private Limited at Karnataka.

Sl. No.	Technical details of the equipment	Description
1	Modules capacity and No. of Module	Model capacity- 320 Wp& 325Wp No. of Modules- 21,21
2	Number of Inverters & Capacity	20 Inverters Capacity- 1 MW
3	Number of Transformers & Capacity	5 transformer of 4 MVA 1 transformer of 16/20 MVA

The technical specification for 20 MW solar project by Renew Wind Energy (MP Three) Private Limited at Karnataka.

Sl. No.	Technical details of the equipment	Description
1	Modules capacity and No. of Module	Model capacity- 320 Wp, 325 Wp& 330Wp No. of Modules- 21,21,21
2	Number of Inverters & Capacity	20 Inverters Capacity- 1 MW
3	Number of Transformers & Capacity	5 transformer of 4 MVA 1 transformer of 15/20 MVA

The technical specification for 50 MW solar project by Renew Saur Urja Private Limited at Karnataka.

Sl. No.	Technical details of the equipment	Description
1	Modules capacity and No. of Module	Model capacity- 315 Wp, 320 Wp& 325Wp No. of Modules- 21,42,21
2	Number of Inverters & Capacity	23 Inverters of 1 MW 24 Inverters of 1.125 MW
3	Number of Transformers & Capacity	6 transformer of 4.5 MVA 5 transformer of 4 MVA 1 transformer of 3 MVA 2 transformers of 20/25 MVA

The technical specification for 50 MW solar project by Renew Wind Energy (TN2) Private Limited at Karnataka.

Sl. No.	Technical details of the equipment	Description
1	Modules capacity and No. of Module	Model capacity- 320 Wp, 325 Wp, 330 Wp, 340 Wp& 345 Wp No. of Modules- 19,21,21,21,21
2	Number of Inverters & Capacity	20 Inverters of 2.5 MW
3	Number of Transformers & Capacity	10 transformers of 5 MVA 2 transformers of 20/25 MVA

The technical specification for 40 MW solar project by Renew Solar Energy (Karnataka Two) Private Limited at Gujarat.

Sl. No.	Technical details of the equipment	Description
1	Modules capacity and No. of Module	Model capacity- 315 Wp, 320 Wp& 325 Wp No. of Modules- 20,20,20
2	Number of Inverters & Capacity	40 Inverters of 1 MW
3	Number of Transformers & Capacity	10 transformers of 4 MVA 2 transformers of 16/20 MVA

The technical specification for 51 MW solar project by Renew Clean Energy Private Limited at Madhya Pradesh.

Sl. No.	Technical details of the equipment	Description
1	Modules capacity and No. of Module	Model capacity- 117.5 Wp No. of Modules- 32
2	Number of Inverters & Capacity	6 Inverters of 2.5 MW 12 Inverters of 3 MW
3	Number of Transformers & Capacity	6 transformers of 6 MVA 3 transformers of 5 MVA 2 transformers of 25/30 MVA

The technical specification for 10 MW solar project by Aalok Solar farms Limited at Rajasthan.

Sl. No.	Technical details of the equipment	Description
1	Modules capacity and No. of Module	Model capacity- 315 Wp No. of Modules- 20
2	Number of Inverters & Capacity	10 Inverters of 1 MW
3	Number of Transformers & Capacity	5 transformers of 2 MVA

The technical specification for 10 MW solar project by AbhaSolarfarms Limited at Rajasthan.

Sl. No.	Technical details of the equipment	Description
1	Modules capacity and No. of Module	Model capacity- 315 Wp No. of Modules- 20
2	Number of Inverters & Capacity	10 Inverters of 1 MW
3	Number of Transformers & Capacity	5 transformers of 2 MVA

The technical specification for 20 MW solar project by HerambaRenewables Limited at Rajasthan.

Sl. No.	Technical details of the equipment	Description
1	Modules capacity and No. of Module	Model capacity- 315 Wp No. of Modules- 20
2	Number of Inverters & Capacity	10 Inverters of 1 MW
3	Number of Transformers & Capacity	10 transformers of 2 MVA

The technical specification for 20 MW solar project by ShreyasSolarfarms Limited at Rajasthan.

Sl. No.	Technical details of the equipment	Description
1	Modules capacity and No. of Module	Model capacity- 315 Wp No. of Modules- 20
2	Number of Inverters & Capacity	10 Inverters of 1 MW
3	Number of Transformers & Capacity	10 transformers of 2 MVA

The technical specification for 143 MW solar project by ReNew Solar Energy (Telangana) Private Limited at Telangana.

Sl. No.	Technical details of the equipment	Description
1	Modules capacity and No. of Module	Model capacity- 310 Wp, 315 Wp, 320 Wp & 325 Wp No. of Modules- 21,21,21,21
2	Number of Inverters & Capacity	130 Inverters of 1 MW
3	Number of Transformers & Capacity	31 transformers of 4.4 MVA 3 transformers of 2.2 MVA 3 transformers of 40/50 MVA

The technical specification for 48 MW solar project by Renew Mega Solar Power Private Limited at Telangana.

Sl. No.	Technical details of the equipment	Description
1	Modules capacity and No. of Module	Model capacity- 310 Wp, 315 Wp & 320 Wp No. of Modules- 21,21,21
2	Number of Inverters & Capacity	48 Inverters of 1 MW
3	Number of Transformers & Capacity	12 transformers of 4 MVA 2 transformers of 25/30 MVA

The technical specification for 30 MW solar project by Renew Saur Shakti Private Limited at Telangana.

Sl. No.	Technical details of the equipment	Description
1	Modules capacity and No. of Module	Model capacity- 320 Wp No. of Modules- 21
2	Number of Inverters & Capacity	30 Inverters of 1 MW
3	Number of Transformers & Capacity	7 transformers of 4 MVA 1 transformers of 2 MVA 1 transformers of 25/30 MVA

The technical specification for 65 MW solar project by Renew Saur Shakti Private Limited at Telangana.

Sl. No.	Technical details of the equipment	Description
1	Modules capacity and No. of Module	Model capacity- 315 Wp, 320 Wp & 325 Wp No. of Modules- 42,84,42
2	Number of Inverters & Capacity	65 Inverters of 1 MW
3	Number of Transformers & Capacity	16 transformers of 4 MVA 1 transformers of 1 MVA 1 transformers of 25/30 MVA 1 transformers of 40/50 MVA

The technical specification for 100 MW solar project by Renew Wind Energy (TN2) Private Limited at Telangana.

Sl. No.	Technical details of the equipment	Description
1	Modules capacity and No. of Module	Model capacity- 320 Wp, 325 Wp & 330 Wp No. of Modules- 60,60,60
2	Number of Inverters & Capacity	28 Inverters of 2.5 MW 30 Inverters of 1 MW
3	Number of Transformers & Capacity	6 transformers of 4 MVA 3 transformers of 2 MVA 14 transformers of 5 MVA 2 transformers of 40/50 MVA

The technical specification for 50 MW solar project by Prathamesh Solar farms Limited at Telangana.

Sl. No.	Technical details of the equipment	Description
1	Modules capacity and No. of Module	Model capacity- 320 Wp & 325 Wp No. of Modules- 20,20
2	Number of Inverters & Capacity	50 Inverters of 1 MW
3	Number of Transformers & Capacity	12 transformers of 4 MVA 2 transformers of 1 MVA

The project is running smoothly ever since commissioning with regular scheduled maintenance. Assessment team concludes the following:

- The implementation status of project activity was found to be in compliance with registered PD/1/.
- VVB has conducted the remote audit to confirm the implementation status of the project/9/.
- The commissioning date of the project activity was found to be accurately and consistently recorded/10/.
- The actual operation of project activity was found to be in compliance with the flow diagram provided in registered PD/1/. However, VVB also confirms that there is possibility of modifications in solar module configuration but no change in project capacity. As module configurations changes will not have any bearing on total emission reduction calculation, VVB found it as appropriate and acceptable.
- The emission reductions achieved during the current monitoring period are 2,034,985 tCO₂e.

The project activity contributes to the sustainable development by utilising solar 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. PP has provided the Letter of Declaration regarding not having created or sought any other form of environment credit for the same period and double counting./16/

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 the project has been implemented as described in the Project Description/1/. CAR 05 was raised on the editorial issue of description and same resolved by revision in the MR.

The total emission reductions achieved in this monitoring period i.e. from 26-Oct-2018 to 24-Dec.-2019 are 2,034,985 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. Assessment team also cross checked by interviewing stakeholders during on remote audit and confirm that there are no any potential negative environmental and socio economic impacts attributed to the project activity.

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, VVB checked that as a part of ongoing mechanism for consultation with stakeholders and to address any potential negative impacts due to implementation of the project, a grievance register has been placed at the project site office. During remote audit, it was verified that project site manager is responsible for this grievance register. VVB confirmed that no comment received during this monitoring period through telephonic conversation with PP .

VVB confirm that the details provided in MR related to ongoing mechanism with consultation with stakeholders to address grievance received if any is sufficient and appropriate

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. Value of total electricity exported to grid for all project locations checked with JMR and cross checked by invoices in line with monitoring requirements of approved PD and applied methodology
Findings	CL 04 was raised on this section and closed successfully. Please refer Appendix 2 for further details
Conclusion	Ex-ante Parameter: EF_{grid,OM,y} = Parameter is fixed ex-ante for the entire crediting period and as per the validated VCS PD same is fixed 0.9726 tCO₂/MWh. Verification team found same was used in the ER calculations. Ex ante value of emission factor is taken from CEA database, Ver. 13, June, 2018. Verification team checked the EF value and found in consistent with registered PD EF_{grid,BM,y} = Parameter is fixed ex-ante for the entire crediting period and as per the validated VCS PD same is fixed 0.8723 tCO₂/MWh. Verification team found same was used in the ER calculations. Ex ante value of emission factor is taken from CEA database, Ver. 13, June, 2018. Verification team checked the EF value and found in consistent with registered PD EF_{grid,CM,y} = Parameter is fixed ex-ante for the entire crediting period and as per the validated VCS PD same is fixed 0.9475 tCO₂/MWh. Verification team found same was used in the ER calculations. Ex ante value of emission factor is taken from CEA database, Ver. 13, June, 2018. Verification team checked the EF value and found in consistent with registered PD. Monitored Parameters: For Karnataka site: EG_{PJ, y,KA} - Quantity of net electricity generation supplied by the project plant/unit to the grid in year y in MWh. The value monitored is 777,118.78 MWh. For Gujarat site: EG_{PJ, y,GJ} -Quantity of net electricity generation supplied by the project plant/unit to the grid in year y in MWh. The value monitored is 89,775.25 MWh. For Madhya Pradesh site: EG_{PJ, y,MP} - Quantity of net electricity generation supplied by the project plant/unit to the grid in year y in MWh. The value monitored is 124,495.97 MWh. For Rajasthan site: EG_{PJ, y,RJ} - Quantity of net electricity generation supplied by the project plant/unit to the grid in year y in MWh. The value monitored is 156,361.45 MWh.

	For Telangana site: EG_{PJ, y, TL} - Quantity of net electricity generation supplied by the project plant/unit to the grid in year y in MWh. The value monitored is 1,000,181.56 MWh. 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: - $BE_y = EG_{PJ,y} \times EF_{grid,CM,y}$ Where: BE_y = Baseline emissions in year y (t CO₂/yr) $EG_{PJ,y}$ = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh/yr) $EF_{grid,CM,y}$ = Combined margin CO₂ emission factor for grid connected power generation in year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system" (t CO₂/MWh) Monitored Parameter: EG_{PJ,y} = 2,147,933.02 MWh The verification team has checked the entire monthly JMR reports/6/for net electricity generated & supplied to the grid and crosschecked same with the invoices raised by PP towards State Utilities for the monitoring period. All values are found correct. All the parameters are monitored and recorded as per the monitoring plan in the MR. 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 ACM0002: Grid-connected electricity generation from renewable sources¹⁰ - Version 19.0 , 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 solar power project emissions (PE_y) are taken as zero. Leakage: As per ACM0002: Grid-connected electricity generation from renewable sources¹¹ - Version 19.0 , Leakage emissions are not considered for the project activity.
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¹⁰<http://cdm.unfccc.int/methodologies/DB/VJI9AX539D9MLOPXN2AY9UR1N4IYGD>

¹¹<http://cdm.unfccc.int/methodologies/DB/VJI9AX539D9MLOPXN2AY9UR1N4IYGD>

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 which was shared by PP and during remote audit, it was confirmed that there was no breakdown except routine maintenance in current monitoring period. PP has also provided single line diagram indicating feeder details along with site photographs, calibration certificate and photographs of meters for all project sites. During the verification remote audit, it was confirmed by PP that all meters pertaining to current monitoring period are tri vector bidirectional meters and connected to respective sub stations in Gujarat, Rajasthan, Karnataka, Madhya Pradesh and Telangana. The metering arrangement is tri-vector bi-directional energy meters (main and check and also one standby meter) at the State Electricity Board (SEB) substation. These meters record parameters including electricity exported & imported. Moreover, the meters are located at the HT side of the transformer and are of accuracy class of 0.2S for each project activity applied for verification. These electricity meters are being used by state electricity board for JMR (Joint Meter Reading) electricity generation statements. The Net 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/5/ raised to respective state electricity board which is in line with Methodology requirement for large scale project activity. 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/13/. In the event of failure of main meter, the check meter will be used in monitoring the electricity data. The agency is experienced in the monitoring system and is managing O&M of numerous other solar projects. Verification team confirms the metering process by interviewing the O&M personnel and PP representatives during remote audit and found the monitoring process is in line with approved PD. Calibration of all the meters were conducted by state electricity board officials as per the industry standards. However, the calibration is done once in a 5 year/19/. The details of Calibration of the meters as confirmed during remote audit and details of calibration certificates are mentioned in Appendix 5 of this report. The assessment team checked the same and found correct. 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. PP representatives confirmed that the CMS data as well as JMR sheets and invoices will be kept for 2 years following the end of the crediting period. During remote audit and discussion with PP, assessment team confirm that the data will be kept for 2 years following the end of the crediting period. 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 remote audit by interviewing through skype meetings and checking of records/ log books maintained at site.
Findings	CL 04 and CL 05 was raised on this section and closed successfully. Please refer Appendix 2 for further details
Conclusion	Hence assessment team confirmed that the value of net electricity exported to the grid as used in emission reduction calculation is correct. 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.

	Remote audit and interview with O&M personnel also confirms that the operational and organizational chart as mentioned in MR is as per the remote audit and thus assessment team confirms that the details are correct. The break down log is checked and found that the solar PV panels undergone scheduled maintenance and break down. No unforced error observed and feeder wise solar PV panels location is also checked and found correct. Calibration and Meter Details provided in Annex. 5 of this report. Assessment team checked the calculation of estimated VER vs. Actual VER. As per the registered PDD the amount of VERs annually is 1,767,281 tCO₂e. The days involved in present monitoring period are 425. Therefore, on pro-rate basis the estimated VERs for the monitoring period is 2,057,793 tCO₂e. Actual VERs obtained for the monitoring period 2,034,985 tCO₂e and thus the actual VER is 1.11 % lower than the estimated VER. Verification team also checked during remote audit and confirmed that no change in project design occurred since installation of project which can affect generation of electricity.
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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

5 VERIFICATION CONCLUSION

Earthood Services Private Limited (Earthood), contracted by **EKI** has performed the independent verification of the emission reductions for the VCS project activity reference number 1851 “Renewable Solar Power Project by ReNew Solar Power Private Limited” in India for the monitoring period 26-October-2018 to 24-December-2019 reported in the Monitoring Report Version 02 dated 02-January-2021.

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: Grid-connected electricity generation from renewable sources¹² - Version 19.0”, the monitoring plan contained in the PD version 02 and VCS guidelines version 4.0, Monitoring Report Version 02 dated 02-January-2021 as per the process described under Section 2 of this report.

¹²<http://cdm.unfccc.int/methodologies/DB/VJI9AX539D9MLOPXN2AY9UR1N4IYGD>

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 26-October-2018 to 24-December-2019 are fairly stated in the Monitoring Report Version 02 dated 02-January-2021. The GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology "ACM0002: Grid-connected electricity generation from renewable sources¹³ - Version 19.0" and the VCS standard.

Verification period: 26-October-2018 to 24-December-2019 (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)
2018	309,222	0	0	309,222
2019	1,725,763	0	0	1,725,763
Total	2,034,985	0	0	2,034,985

Approved by



Dr. Kaviraj Singh

Managing Director

Earthood Services Privated Limited

Date: 16/02/2021

Place: Gurgaon, Haryana

¹³<http://cdm.unfccc.int/methodologies/DB/VJI9AX539D9MLOPXN2AY9UR1N4IYGD>

APPENDIX 1: DOCUMENTS REVIEWED OR REFERENCED (VERIFICATION)

S.No	Title of Document	Version	Date
1.	Registered VCS PD	Ver. 02	29/01/2019
2.	VCS Monitoring Report	2	02/01/2021
3.	ER spreadsheet (corresponding to the final monitoring report)	1	09/12/2020
4.	Certificates of Calibration for meters belongs to project activity	-	-
5.	Invoice issued by PP for the duration of monitoring period	-	26/10/2018 to 24/12/2019
6.	Joint Meter Readings for the duration of monitoring period	-	26/10/2018 to 24/12/2019
7.	"Consolidated baseline methodology for grid-connected electricity generation from renewable sources", ACM0002,	"ACM0002 - Version 19"	-
8.	CO ₂ Baseline Database for the Indian Power Sector published by the Central Electricity Authority (CEA), Ministry of Power, Govt.	version 13	-
9.	Remote audit assessment, interviews of plant staff	-	13/07/2020
10.	Commissioning certificate for all the SPVs	-	
11.	Power Purchase Agreements	-	
12.	VCS webpage for the project, VCS ID 1851; https://registry.terra.org/app/projectDetail/VCS/1851	-	Last accessed on 18/01/2021
13.	O&M contract for all project sites	-	
14.	VCS Standard	Version 4.0	Last accessed on 18/01/2021
15.	VCS Program Guide	Version 4.0	Last accessed on 18/01/2021
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	-	08/12/2020
17.	Google Earth desktop/Mobile application	-	Last accessed on 18/01/2021
18.	Technical specifications from technology supplier		DPR
19.	Meter calibration guidelines: http://cea.nic.in/reports/regulation/CEA_metering_regulation_amendment_2019.pdf		
20.	VCS Validation report	Ver.08	08/02/2019

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

Table 1. Remaining FAR from previous verification

FAR ID	XX	Section no.	XX	Date : XX
Description of FAR				
There is no FAR from the validation/previous verifications of the project activity				
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	02	Section no.	1.1	Date : 03/04/2020
Description of CL				
On front page of MR, duration of monitoring period is not consistent with duration mentioned in sec. 1.1 of MR. PP shall clarify. Value of electricity supplied to grid / year and annual GHG reduction achieved / year could not be verified as no ER sheet provided. PP shall provide ER sheet and MR also need to be revised accordingly. PP shall provide commissioning certificates of all plants at all locations				
Project participant response				Date : 09/12/2020
The monitoring period dates are now made consistent throughout the revised MR as per the actual ER sheet. The values of actual electricity generated and GHG reduction achieved for the current monitoring period has been provided in the revised MR. The actual ER sheet is also provided to DOE assessment team. Commissioning certificates of all plants are now provided to the DOE assessment team.				
Documentation provided by project participant				
Revised MR Actual ER sheet Commissioning certificates				
DOE assessment				Date: 17/12/2020
PP has now corrected the duration of monitoring period consistent with the duration mentioned in section 1.1 of revised MR version 02 dated 09/12/2020. Hence, Comment closed. PP has now provided the ER sheet for the verification of the value of electricity supplied to grid/year and annual GHG reduction achieved/ year. PP has also revised the MR as per ER sheet. Hence, Comment closed. PP has not provided the commissioning certificates of all plants at all locations. Hence, Comment open.				
Project participant response				Date : 02/01/2021
Commissioning certificates of all plants of all locations are now provided to the DOE assessment team.				
Documentation provided by project participant				
Commissioning certificates				
DOE assessment				Date: 16/01/2021

PP has provided the commissioning certificates of all plants at all locations, which is checked by DOE and found correct. Hence, Comment closed.

CL ID	03	Section no.	1.9	Date : 03/04/2020
Description of CL				
PP shall provide an undertaking regarding no double counting of emission reductions claimed for this monitoring period.				
Project participant response				Date : 09/12/2020
Undertaking from PP regarding no double counting of emission reduction is now provided to the DOE assessment team.				
Documentation provided by project participant				
PP Undertaking				
DOE assessment				Date: 17/12/2020
PP has submitted an undertaking document regarding double counting, which is checked by the verification team and found correct .Hence, Comment closed.				

CL ID	04	Section no.	4.2	Date : 03/04/2020
Description of CL				
Value of $EG_{PJ, Y}$ for all states not provided in MR PP shall provide copies of JMR/Invoices for all locations PP shall provide calibration certificates of all energy meter involved in this monitoring period across locations				
Project participant response				Date : 09/12/2020
Value of $EG_{PJ, y}$ for all states are now provided in the revised MR. JMR & Invoices of all locations are now provided. Calibration certificates of all energy meters of all locations are now provided to the DOE assessment team. The calibration details are also included in the revised MR.				
Documentation provided by project participant				
Revised MR JMR & Invoices Calibration Certificates				
DOE assessment				Date: 17/12/2020
PP has now provided the value of $EG_{PJ, Y}$ for all states in the revised MR version 02 dated 09/12/2020, which is checked by DOE team and found correct. Hence, comment closed. PP has not provided the copies of JMR/share certificates, invoices pertaining to current monitoring period. Hence, Comment open. PP has not provided the calibration certificates of all energy meter involved in the monitoring period across location. Hence, Comment open.				
Project participant response				Date : 02/01/2021
2. JMR/share certificates and invoices for current monitoring period are now provided to the DOE assessment team. 3. Calibration certificates of all energy meters are now provided to the DOE assessment team.				
Documentation provided by project participant				
JMR/share certificates and invoices Calibration certificates				
DOE assessment				Date: 16/01/2021
PP has provided the copies of JMR/share certificates, Invoices pertaining to current monitoring period of all locations, which is reviewed by the DOE. Hence, Comment Closed. PP has submitted the calibration certificates of all energy meter involved in the monitoring period across locations. Hence, Comment closed.				

Table 3. CAR from this verification

CAR ID	05	Section no.	1.11	Date: 03/04/2020
In sec. 1.11, name of host country DNA incorrectly mentioned. Corrective action required				
Project participant response				Date: 09/12/2020
The host country DNA name is now corrected in section 1.11 of the revised MR.				
Documentation provided by project participant				
Revised MR				
DOE assessment				Date: 17/12/2020
PP has not corrected the name of the country's DNA in the section 1.11 of the revised MR version dated 09/12/2020. Hence, Comment open.				
Project participant response				Date : 02/01/2021
The correction is now made in section 1.11 of the revised MR.				
Documentation provided by project participant				
Revised MR				
DOE assessment				Date: 16/01/2021
PP has now corrected the name of the country's DNA in the section 1.11 of revised MR, which is checked by the DOE and found correct. Hence, Comment closed.				

CAR ID	06	Section no.	5.1	Date: 03/04/2020
In sec. 5.1, calculation of baseline emissions seems to be incorrect. PP shall provide calculation of baseline emission along with ER sheet.				
Project participant response				Date: 09/12/2020
<i>Calculation of the baseline emission is now corrected in the revised MR. The actual ER sheet is now provided to the DOE assessment team.</i>				
Documentation provided by project participant				
Revised MR				
Actual ER sheet				
DOE assessment				Date: 17/12/2020
PP has now corrected the calculation of baseline emissions in section 5.1 of revised MR version 02 dated 09/12/2020, which is checked by DOE team and found correct. Hence, comment closed.				

CAR ID	07	Section no.	5,4	Date: 03/04/2020
Sec. 5.4 of MR is not complete. PP shall provide revised MR with all the section duly filled in.				
Project participant response				Date: 09/12/2020
<i>Details are now provided in the section 5.4 of the revised MR.</i>				
Documentation provided by project participant				
Revised MR.				
DOE assessment				Date: 17/12/2020
PP has now updated section 5.4 of revised MR version 2 dated 09/12/2020, which is checked by the DOE team and found correct. Hence, Comment closed.				

Table 4. FAR from this verification

FAR ID	Nil	Section no.	XX	Date: XX
Description of FAR				
XX				
Project participant response				Date: DD/MM/YYYY
XX				
Documentation provided by project participant				
XX				

APPENDIX 3: COMPETENCE OF TEAM MEMBERS AND TECHNICAL REVIEWERS

Competence Statement			
Name	Pankaj Kumar		
Education	M.Sc. in Environment Management Post Graduate Diploma in Environment Law B.Sc. (Hons.) Environment and Water Management		
Experience	15 Years		
Field	Climate Change/Waste Management/EIA		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	YES (AMS I.D, ACM0002)		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (1.2)	YES		
Reviewed by	Shreya Garg	Date	01/11/2019
Approved by	Anshika Gupta	Date	01/11/2019

Competence Statement	
Name	Shreya Garg
Country	India
Education	M.Sc. (Climate Science & Policy), TERI University
Experience	7 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., ACM0002, ACM0012
Local expert	YES (India)
Financial Expert	NO

Technical Reviewer	YES		
TA Expert	YES (TA 1.2, TA 3.1)		
Reviewed by	Abhishek Mahawar	Date	01/03/2018
Approved by	Ashok Gautam	Date	01/03/2018

APPENDIX 4: ABBREVIATIONS

Abbreviations	Full texts
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction(s)
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
PP	Project Participant
OM	Operating Margin
PLF	Plant Load Factor
PPA	Power Purchase Agreement

APPENDIX 5: METER CALIBRATION DETAILS

The details of the energy meters and their calibration details are provided in the table below.

Name of SPVs	Capacity in MW	Meter Serial No.	Accuracy Class	Make	Date of Calibration	Due date of calibration ¹⁴
Bhumi Prakash Private Limited	20 MW	Main Meter-15197833	0.2 s	L & T	23.09.2017	22.09.2022
		Check Meter-15197834	0.2 s	L & T	23.09.2017	
Renew Wind Energy (MP Four) Private Limited	20 MW	Main Meter-16083161	0.2 s	L & T	20.04.2017	19.04.2022
		Check Meter-16083118	0.2 s	L & T	20.04.2017	
Renew Agni Power Private Limited	20 MW	Main Meter-16113386	0.2 s	L & T	21.02.2017	20.02.2022
		Check Meter-16113401	0.2 s	L & T	21.02.2017	

¹⁴At the time of commissioning, newly calibrated meters were installed. Also, the calibration frequency is once in five years, the calibrations are valid during the current monitoring period. Hence, no delay in error factor is applicable, during the current monitoring period.

Renew Wind Energy (Karnataka 3) Private Limited	20 MW	Main Meter- 16113413	0.2 s	L & T	05.02.2017	04.02.2022
		Check Meter- 16113221	0.2 s	L & T	05.02.2017	
Tarun Kiran Bhoomi Private Limited ¹⁵	20 MW	Old Main Meter- 15197833	0.2 s	L & T	12.02.2017	03.09.2022
		Old Check Meter- 15197834	0.2 s	L & T	12.02.2017	
		New Main Meter- 16193095	0.2 s	L & T	04.09.2017	
		New Check Meter- 13192165	0.2 s	L & T	04.09.2017	
Renew Wind Energy (Karnataka 4) Private Limited	20 MW	Main Meter- 16083139	0.2 s	L & T	06.03.2017	05.03.2022
		Check Meter- 16083133	0.2 s	L & T	06.03.2017	
Renew Wind Energy (Budh 3) Private Limited	20 MW	Main Meter- 17069178	0.2 s	L & T	23.02.2018	22.03.2023
		Check Meter- 17069183	0.2 s	L & T	23.02.2018	
Renew Wind Energy (Budh 3) Private Ltd	20 MW	Main Meter- 17166928	0.2 s	L & T	14.02.2018	13.02.2023
		Check Meter- 17166940	0.2 s	L & T	14.02.2018	
Renew Wind Energy (Budh 3) Private Limited	20 MW	Main Meter- 16113377	0.2 s	L & T	20.12.2017	19.12.2022
		Check Meter- 16113373	0.2 s	L & T	20.12.2017	
	20 MW	Main Meter- 16113430	0.2 s	L & T	30.06.2017	29.06.2022

¹⁵ The newly calibrated main & check meters were installed on 04.09.2017.

Renew Wind Energy (Maharashtra) Private Limited		Check Meter- 16113436	0.2 s	L & T	30.06.2017	
Renew Wind Energy (Rajasthan Four) Private Limited	20 MW	Main Meter- 16112918	0.2 s	L & T	27.09.2017	26.09.2022
		Check Meter- 16112913	0.2 s	L & T	27.09.2017	
Renew Wind Energy (MP Three) Private Limited	20 MW	Main Meter- 16112933	0.2 s	L & T	27.09.2017	26.09.2022
		Check Meter- 16112921	0.2 s	L & T	27.09.2017	
Renew Saur Urja Private Limited	50 MW	Old Main Meter- 16083197	0.2 s	L & T	27.04.2017	26.04.2022
		Old Check Meter- 16083162	0.2 s	L & T	27.04.2017	
		New Main Meter- 17117926	0.2 s	L & T	27.04.2017	26.04.2022
		New Check Meter- 17117928	0.2 s	L & T	27.04.2017	
Renew Wind Energy (TN2) Private Limited	50 MW	Main Meter- 16195517	0.2 s	L & T	08.12.2017	07.12.2022
		Check Meter- 16195508	0.2 s	L & T	08.12.2017	
		Main Meter- 16195519	0.2 s	L & T	08.12.2017	
		Check Meter- 16195523	0.2 s	L & T	08.12.2017	
Renew Solar Energy (Karnataka Two) Private Limited	40 MW	10195523	0.2 s	Secure	20.03.2017	19.03.2022
Renew Clean Energy Private Limited	51 MW	XE518730	0.2 s	Secure	25.05.2017	24.05.2022
		XE518731				
Aalok Solarfarms Limited	10 MW	17075514	0.2 s	L & T	08.08.2017	07.08.2022

Abha Solarfarms Limited	10 MW	17075486	0.2 s	L & T	04.08.2017	03.08.2022
Heramba Renewables Limited	20 MW	17075537	0.2 s	L & T	04.08.2017	03.08.2022
		17075547	0.2 s	L & T	04.08.2017	
Shreyas Solarfarms Limited	20 MW	17075525	0.2 s	L & T	04.08.2017	03.08.2022
		17075530	0.2 s	L & T	04.08.2017	
ReNew Solar Energy (Telangana) Private Limited	143 MW	Main Meter-APX01166	0.2 s	Secure	22.10.2016	21.10.2021
		Check Meter-APX01167	0.2 s	Secure	22.10.2016	
		Standby Meter-APX01168	0.2 s	Secure	22.10.2016	
Renew Mega Solar Power Private Limited	48 MW	Main Meter-APX01147	0.2 s	Secure	10.01.2017	09.01.2022
		Check Meter-APX01148	0.2 s	Secure	10.01.2017	
		Standby Meter-APX01149	0.2 s	Secure	10.01.2017	
Renew Saur Shakti Private Limited	30 MW	Main Meter-16196362	0.2 s	L & T	10.01.2017	10.01.2022
		Check Meter-16196398	0.2 s	L & T	10.01.2017	
		Standby Meter-16196385	0.2 s	L & T	10.01.2017	
Renew Saur Shakti Private Limited	65 MW	Main Meter-16196322	0.2 s	L & T	11.01.2017	10.01.2022
		Check Meter-16196377	0.2 s	L & T	11.01.2017	
		Standby Meter-16196411	0.2 s	L & T	11.01.2017	
Renew Wind Energy (TN2) Private Limited	100 MW	Main Meter-APZ00378	0.2 s	Apex 150	08.10.2017	09.10.2022

		Check Meter- APZ00379	0.2 s	Apex 150	08.10.2017	
		Standby Meter- APZ00380	0.2 s	Apex 150	08.10.2017	
Prathamesh Solarfarms Limited	50 MW	Main Meter- XD551233	0.2 s	Secure	18.09.2017	17.09.2022
		Check Meter- XD551234	0.2 s	Secure	18.09.2017	
		Standby Meter- XD551235	0.2 s	Secure	18.09.2017	