



VERIFICATION REPORT FOR

“KARNATAKA PAVAGADA-II SOLAR PROJECT BY AVAADA (150 MW)”



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Summary:

LGAI Technological Center, S.A. (hereafter referred to as Applus+ Certification) has been contracted by WeAct Pty Ltd. to conduct the second periodical verification of the project “Karnataka Pavagada-II Solar Project by Avaada (150 MW)”, VCS ID 2017, against VCS Standard Version 4.1.

The verification includes confirming the implementation of the monitoring plan of the registered VCS PD and MR (Project ID 2017) and the application of the monitoring methodology as per ACM0002, Version 19 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”.

The project activity involves generation of electricity by using the renewable energy source (solar) supplying to the Indian electricity grid. Thus, the project aims to displace electricity produced by fossil fuel power plants harnessing solar energy. Therefore, the project reduces greenhouse gas emissions and thereby contributes to sustainable development.

A risk-based approach has been followed to perform this verification. In the course of verification, 03 Corrective Action request (CARs), 00 Forward Action Request (FAR) and 07 Clarification request (CRs) were raised and successfully closed.

The review of the project design documentation, monitoring report and additional documents related to baseline and monitoring methodology; the subsequent background investigation, telephonic interviews and stakeholders have provided Applus+ Certification with sufficient evidence to verify the fulfillment of the stated criteria.

Applus+ Certification confirms that the project is implemented in accordance with the registered VCS PD. The monitoring system is in place and the emission reductions are calculated without material misstatements. Our opinion relates to the project’s GHG emissions and the resulting GHG emission reductions reported and related to the valid and registered project baseline and monitoring and its associated documents. Based on the information seen and evaluated we confirm that the emission reductions from the project activity “Karnataka Pavagada-II Solar Project by Avaada (150 MW)” in India during the period 01/11/2020 - 31/08/2021(including both dates) amount to **252,058 tonnes of CO₂e**.

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1 INTRODUCTION

1.1 Objective

Applus+ Certification has been contracted by WeAct Pty Ltd. (authorised representative of project proponent), to undertake the second periodic verification of the renewable energy project titled “Karnataka Pavagada-II Solar Project by Avaada (150 MW)” (VCS ID-2017). The verifiers have reviewed the GHG data collected to date for the monitoring period from 01/11/2020 to 31/08/2021 (both dates included) covered in this verification. The objective of this verification is a thorough and independent assessment of registered project activities against the applicable VCS requirement by the VVB. The verification process shall determine whether the proposed project activity complies with the requirements of latest VCS guidelines, applicability conditions of the selected methodology, relevant host country regulations and guidance issued by the VCS Board.

1.2 Scope and Criteria

The scope of the verification was the independent and objective review and ex-post determination of the monitored reductions in GHG emissions from “Karnataka Pavagada-II Solar Project by Avaada (150 MW)” The verification of this project was based on the registered project description/01/ & monitoring report /05/ and supporting documents submitted by the project proponent to the verification team. The documents were reviewed against the following guidance and protocols:

VCS Standard: VCS standard Version 4.0 dated 19-September-2019; updated version 4.1, dated 22/04/2021

Approved baseline and monitoring methodology ACM0002, Version 19, “Grid-connected electricity generation from renewable sources”.

Approved VCS PD, version 2.1, dated 21/12/2019

Final Validation Report, version 01 dated 23/12/2019

VCS Program Guide, Version 4.0, dated 19/09/2019

ISO 14064-3: Specification with guidance for the validation and verification of greenhouse gas assertions, 2006

CDM VVS and PS for project activities version 03.0

The verification is not meant to provide any consulting towards the client. However, stated request for clarifications and/or corrective actions may provide input for improvement of the project design.

1.3 Level of Assurance

The level of assurance of the verification report falls under reasonable assurance engagements as selected by the Client. The verification team verified the complete monitoring data for all the parameters of the monitoring plan and confirms that the reported emission reductions are free from any type of material errors.

1.4 Summary Description of the Project

The project activity involves electricity generation by solar electric convertors and supplying the generated electricity to the IndianGrid through Karnataka state grid via Power PurchaseAgreement (PPA)with 'Bangalore Electricity Supply Company Limited' (BESCOM), for a total install capacity of 150 MW, with three separate blocks each of capacity 50 MW. The project being a renewable energy generation activity, it leads to removal of fossil fuel dominated electricity generation. The project activity results in reductions of greenhouse gas (GHG) emissions that are real, measurable, and verifiable and also plays beneficial role in the mitigation of climate change.

The project activity includes a total capacity of 150 MW_{ac} (in 3 phases each of 50 MW_{ac}) of solar plant in the Pavagada Solar Park in the state of Karnataka. The Project activity has been developed, implemented and commissioned by the Special Purpose Vehicle "Avaada Solarise Energy Private Limited" which is the Project Proponent in VCS. The project activitydisplaces anthropogenic emissions of greenhouse gases (GHG's) estimated to be approximately 252,058 tCO₂e per year for current monitoring period, thereby displacing 2,69,051.38MWh/year amount of electricity from the generation-mix of power plants connected to the Indian electricity grid, which is mainly dominated by thermal/fossil fuel based power plant.

The solar power Does not involve any fossil fuel consumption and hence the project Does not lead to any greenhouse gas emissions. Thus, electricity would be generated through sustainable means without causing any negative impact on the environment.

In terms of project location, the 150 MW_{AC} solar PV Plant site is located at the Pavagada Solar Park, in Pavagada Taluk, Tumkur district, in the Indian state of Karnataka. The project site is around 130 kms away from Bellary which is the nearest railway station. Nearest airport is at Bengaluru Airport, 155kms.

The geo-coordinates of the location are as follows:

Latitude: 14° 40' 0.012" N

Longitude: 75° 49' 59.988" E

Location of the project was verified through Google Map (<https://www.gps-coordinates.net/>) and found consistent with the data provided in the registered PD /01/.

The project activity has been commissioned in 3 phases; 1st phase of 50 MW commissioned on 8-Nov-2019 (Block 39), 2nd phase of 50 MW on 21-Nov-2019 (Block 40A) and 3rd phase of 50 MW on 27-Nov-2019 (Block 22). The Project is in continuous operation since commissioning. The energy generated from the 150 MW_{AC} solar PV plant will be evacuated at 66kV to the 220/66 kV Pooling Sub-station, which would be further evacuated to 400/220 kV GSS located about 1.5 km from the Pooling Sub Station. This information was verified through photographs indicating name-plate details and found to be in line with the details provided in the registered PD /01/. The emission reductions from the project activity during the period 01/11/2020 – 31/08/2021 (including both dates) amount to 252,058 tonnes of CO₂e.

2 VERIFICATION PROCESS

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

2.1 Method and Criteria

Verification was conducted using Applus+ Certification procedures in line with the requirements specified in the VCS standard Version 4.1 Requirements, CDM M&P, the latest version of the CDM Validation and Verification Standard, and relevant decisions of the COP/MOP and the CDM EB and applying standard auditing techniques. The project activity Does not fall under category “grouped projects”, hence any sampling methods are not to be employed by the validation/verification body for the verification of GHG emission reductions or removals generated by the project.

It is to be assessed and determined whether the proposed implementation and operation of the project activity, and the steps taken to report emission reductions comply with the criteria and relevant guidance provided by the VCS Board. The verification process consists of the following three phases:

1. A desk review of the VCS PD and VCS MR.
2. Telephonic interviews with project stakeholders
3. The resolution of outstanding issues and issuance of final report and opinion.

2.2 Document Review

The verification is performed primarily as a document review of the registered VCS PD/01/, previous MR and Verification report and associated documents as stated in detail in appendix 1 of this document. The assessment is performed by a verification team referring the Applus+ Certification internal procedures in line with latest VCS requirements. The cross checks between information provided in the Monitoring report, VCS PD and information from sources other than those used, if available, the team's sectoral or local expertise and, if necessary, independent background investigations.

2.3 Interviews

On-site inspection has been performed by the assessment team. During on-site visit; the representatives of the PP and O&M contractors were interviewed on 23/11/2021 i.e. personnel responsible for monitoring of the project activity, data collection and management, and QA/QC procedure. The details of the people interviewed are mentioned in the table below:

S N	Name	Organization
1	Mr. N Laksham Naidu	Dy. Manager- Avaada Solarise Energy Private Limited
2	Mr. N Bhergev	Manager- Avaada Solarise Energy Private Limited
3	Mr. Deepjyoti Borah	WeAct Pty Ltd.
4	Mr. C. Manish	Dy. Manager- Avaada Solarise Energy Private Limited
5	Mr. M L Narayana	Sr. Engineer – Avaada Solarise Energy Private Limited
6	Mr. Nureshu T. R.	Security Supervisor (Local Village Person) – Avaada Solarise Energy Private Limited
7	Mr. Pavan Kalyan	Security Person (Local Village Person) – Avaada Solarise Energy Private Limited
8	Mr. Srinivasa S	Office Boy- Avaada Solarise Energy Private Limited
9	Mr. Nagaraju R. V.	Office Boy- Avaada Solarise Energy Private Limited
10	Mr. Yaswarth Kumar K	Security Person (Local Village Person) – Avaada Solarise Energy Private Limited

The topics covered during interview ranges from general features and implementation of project to technical details of the project like calibration details, monitoring and measuring system and data collection, recording and archiving procedures. The assessment was drawn based on the feedback received during telephonic interview coupled with the documentation.

2.4 Site Inspections

As discussed in the above section, physical site inspection is done for the current verification.

Site Location visited: 150 MWAC solar PV Plant site is located at the Pavagada Solar Park (B22, B39 and B40A), in Pavagada Taluk, Tumkur district, in the Indian state of Karnataka.

A Verification On-site visit was undertaken by the verification team on 23/11/2021 to carry out the following;

- a. An assessment of the implementation and operation of the registered project activity as per the registered VCS PD and VCS MR;
- b. A review of information flows 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 and data from other sources such as plant logbooks, inventories, purchase records or similar data sources;
- e. A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the PD, 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.

The assessment team has verified sufficient appropriate audit evidences, to reduce audit risk to an acceptably low level as requisite to achieve reasonable level of assurance for the current verification.

2.5 Resolution of Findings

The objective of this step is to identify, discuss and conclude on the issues related to the monitoring, implementation and operations of the registered project activity that could impair the capacity of the registered project activity to achieve emission reductions or influence the monitoring and reporting of emission reductions. This is done based on the desk review and telephonic interview of site personnel. The verification team prepares and/or updates a verification protocol (internal document) that records the conformities and non-conformities, which may be of following types;

CAR (Corrective Action Request) is raised if one of the following occurs:

Non-compliance with the monitoring plan, the methodology or the standardized baseline are found in monitoring and reporting and has not been sufficiently documented by the project participants, or if the evidence provided to prove conformity is insufficient;

Modifications to the implementation, operation and monitoring of the registered project activity has not been sufficiently documented by the project participants;

Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impact the quantity of emission reductions;

Issues identified in a FAR during validation to be verified during verification or previous verification(s) have not been resolved by the project participants.

Clarification request (CR) is raised if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met. All CARs and CRs raised by the Applus+ Certification during verification shall be resolved prior to submitting a request for issuance.

FAR (Forward Action Request) is raised during verification if the monitoring and reporting require attention and/or adjustment for the next verification period.

During the current verification, 03 Corrective Action request (CARs), 00 Forward Action Request (FAR) and 07 Clarification request (CRs) were raised and successfully closed.

All the findings that are raised and communicated to project participant during the verification are included under Appendix 4. 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

The project activity is undergoing second verification under VCS; there were no FARs raised during the validation or previous verification. Also during the current verification no FAR is raised.

2.6 Eligibility for Validation Activities

Not applicable, as Applus+ holds the accreditation to perform validation activities in this Sectoral Scope.

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

The project activity is registered under the VCS only (VCS Project ID 2017). The project proponent has provided a self-declaration in this regard which confirms that project proponent will not claim Emission reductions for current monitoring period **01-November-2020 to 31-August-2021** under any other GHG program except VCS, hence accepted by the assessment team.

Audit team checked the REC Mechanism database of India and found that the project activity is not accredited/registered under REC mechanism. Further, declaration for the same is checked and found correct by the assessment team. Also assessment team checked the following registries to confirm the same. The details of the registries checked are as follows:

1. <https://www.recregistryindia.nic.in/>
2. <http://cdm.unfccc.int/>
3. <http://www.goldstandard.org/>

Rejection by other GHG programs

VVB has crossed check the same through other GHG interfaces and found consistent. A declaration has been submitted by PP to VVB confirming the same. Thus, this was further confirmed through a declaration/15/ submitted by the PP and hence accepted by the assessment team.

The details of the registries checked are as follows:

1. <https://www.recregistryindia.nic.in/>
2. <http://cdm.unfccc.int/>
3. <http://www.goldstandard.org/>
4. <https://verra.org/verra-standards-and-programs/>

The Project has no intend to generate any other form of GHG-related environmental credit for GHG emission reductions or removals claimed under the VCS Program. Renewable energy certificates are available for trading in the host country. However, the same is not availed by the Project Proponent. The undertaking regarding the same is submitted by the PP which is acceptable to the assessment team and assessment team also checked the REC web site (<https://recregistryindia.nic.in/>) and found the declaration/15/ to be correct.

3.2 Methodology Deviations

There is no methodology deviation identified since project registration and also during the current monitoring period.

3.3 Project Description Deviations

VVB has verified that there is no change in project design related to install capacity, technology, specification, etc. However, during the current monitoring period there is change in monthly energy accounting and bill generation practice as mandated by “Southern Regional Power Committee (SRPC)” under Central Electricity Authority, Ministry Of Power India. As a part of earlier practice which was reported at the time of project design and validation, the standard practice of monthly joint meter reading was adopted and monthly net electricity units were reflected in the form of a B-Form. However as per the current provision, the B-form reflects the net Energy Billed as "Net Energy - 15% Import - Tr Loss" in kWh. There is no separate import value shown in the B-form. Therefore, during the period "Export" value itself is the net energy billed for the month. Also, starting from the year 2020, the SRPC has affected an online practice of monthly energy accounting, termed as “Regional Energy Account” (REA). In this new practice, the project wise monthly net energy units are calculated by authority and uploaded under ‘Regional Energy Account’ for that month on the SRPC web site (www.srpc.kar.nic.in) to enable downloading of the monthly net energy units by respective constituents.

This deviation has been reported under the section 3.2 of the MR. This change of practice has also been accounted and properly demonstrated in the ER sheet and VVB has further verified this deviation from the B-Forms, REA documents and SRPC website. VVB is of the opinion that this change in procedure of monthly statement generation Does not have any impact on any monitoring parameter of the project. Rather this new accounting practice simplifies the monitoring aspects of the project with a provision to access energy accounting online. Also, there is no impact on emission reductions and applicability of the methodology as project is continued to evacuate power under same arrangement, as per existing PPA arrangement.

Furthermore, during the current monitoring period there is a change in Standby meter has been identified for Plot No:22, 39 & 40A which can be verified with the meter calibration and installation certificates provided by PP and as detailed in Section 4.3 of MR and also discussed in section 4.5 below of this Verification report.

However, this change of standby Meters Does not have any impact on any parameter of the project; also no impact on emission reductions calculation and applicability of the methodology. Therefore, no further change in project description is applicable. The main meter & Check meter are used for the generation of Monthly Statement of energy delivered to the grid.

3.4 Grouped Project

Not applicable. The project activity is not a grouped project

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

The project activity involves the installation of Solar PV plant. The total installed capacity of the project is 150 MW_{ac}. The project is developed by Avaada Solarise Energy Private Limited. The project activity has been commissioned in 3 phase in the Pavagada Solar Park in Karnataka. The 1st phase of 50 MW was commissioned on 08-Nov-2019, 2nd phase of 50 MW on 22-Nov-2019 and the 3rd phase of 50 MW on 27-Nov-2019. The energy generated from the 150 MW solar PV plant is being evacuated at 66kV to the 220/66 kV Pooling Sub-station, which would be further evacuated to 400/220 kV GSS located about 1.5 km from the Pooling Sub Station. Thus, project has been fully implemented and has been operational.

Solar Power Project Technology Details:

The technology employed, converts solar energy to electrical energy. In solar power generation, energy of solar is converted into mechanical energy and subsequently into electrical energy. The technology is an environment friendly technology since there are no GHG emissions associated with the electricity generation. There is no transfer of technology involved in the project activity.

Technical Details:

Block 39 & 40A (50 X 2 MW):

Date of Commissioning:	Block 39 – 8th November 2019 Block 40 A – 21st November 2019
Location Number:	Rayacharlu (V)
SS connected to:	8
Module Model:	
Make or Supplier(s)	Renesola
Maximum Power (Pmax)	325Wp, 330Wp and 335 Wp
Module technology	Polycrystalline Silicon photovoltaic modules
Orientation	12*6 = 72 cells, 12 Degree, Fixed Angle
Other details (if any)	
Inverter:	
Model / Make	SINENG & 3125KW ,Grid connected PV inverter, EP-3125-HA-UD
No. of Inverters	32
Lifetime of the Inverters	25 years
Technical Lifetime of the SPV plant:	25 years

Block 22 (50 MW):

Date of Commissioning:	27th November 2019
Location Number:	Thirumani (V)
SS connected to:	5 (KSPDCL T1)

Module Model:	
Make or Supplier(s)	JA solar and Renesola
Maximum Power (Pmax)	325wp,330wp and 335wp
Module technology	Polycrystalline Silicon photovoltaic modules
Orientation	12*6 = 72 cells, 12 Degree, Fixed Angle
Other details (if any)	
Inverter:	
Model / Make	SUNGROW & 3125KW GRID CONNECTED PV INVERTER & SG3125HV-20
No. of Inverters	16
Lifetime of the Inverters	25 YEARS
Technical Lifetime of the SPV plant:	25 YEARS

During the remote audit and from the various supporting documents, it was evident that the project activity is in continuous operation since commissioning and there is no such incident reported during the current monitoring period which may impact the operation & capacity design of the project activity. Therefore, no events have happened that may impact the GHG emission reductions or removals and monitoring in this monitoring Period. However, there was some change in billing procedure and change of energy meters during the current monitoring period which was as per the requirement of the state utility applicable for all power producers across the state. PP doesn't have any control on such events or not under the direct purview of PP. However, such changes in the process did not have any impact on the project operation, design and emission reductions.

The power generated through the proposed project activity being supplied to Indian grid through a contractual arrangement (PPA). The technical specification of the project activity solar power plant has been checked through the photographs of the solar plants installed at site, commissioning certificates and are found to be consistent with the information mentioned under section 3.1 of MR. The current status of the project activity is verified through the screen shots of SCADA system/18/, indicating the real-time generation data and hence it is confirmed that the project is fully functioning.

The project boundary includes the solar project, sub-stations, grid and all power plants connected to grid. The project activity evacuates power to the Indian grid. Therefore, the entire Indian grid and all connected power plants have been considered in the project boundary for the project activity.

The project developer "ASEPL" is having a dedicated metering arrangement on his 66kV/220V line at KSPDCL SS-1 and SS-2 which is further connected to Pavagada (PGCIL grid substation) in Tumkur district (Karnataka) as shown in the project boundary diagram provided in section 4.3 of the MR. The meters are approved, tested & sealed by the State Utility. The meters are

solely in the custody of State Utility. The frequency of calibration is once in 5 years as prescribed in the registered PD. All the meters are of 0.2s accuracy class.

The aggregated net monthly electricity supplied/exported by the project activity (150MW Capacity) is monitored, measured & metered continuously at the 66kV/220V KSPDCL substation 1 & substation 2 which forms the basis for the monthly energy units(i.e. REA statements). REA reports can be cross checked with the monthly invoices of sale.

In the absence or delay in the meter calibration appropriate guidelines will be applied appropriately to confirm the conservativeness of metering & monitored values.

The metering arrangement, accuracy class of meters, calibration frequency and apportioning approach is under control of state electricity board and project proponent (PP)Avaada Solar Does not have any control on it. PP is getting value of net electricity supplied to grid and the same is considered the monitoring parameter.

Monthly values of $EG_{P,j,y}$ is obtained directly from the monthly REA statements and energy breakup reports issued by state utility (BESCOM)/08/. The invoicing is being done against electricity supplied by the project plant to the grid. The measurement results are cross checked with records of invoices and it is in line with applied methodology. Thus this parameter is considered in emission reduction calculations. As verified through the calibration certificates and recent photographs of energy meters that there are one set of energy meters (main and check) installed at each feeder and are under control of state utility (BESCOM), sealed in presence of both the state utility official & representative of PP.

Joint Meter Reading is being taken jointly by the officials of state utility and project participant's representative on monthly basis and accordingly monthly Energy Breakup reports is being prepared. This B-Form practice and the monthly energy accounting has been conducted via online practice of monthly energy accounting, termed as "Regional Energy Account" (REA) implemented and controlled by Southern Regional Power Committee (www.srpc.kar.nic.in).

The VVB team has confirmed that monitoring methodology applies consistently the choice of the option selected for monitoring of baseline emissions. The change in monthly energy accounting & billing practice has been adequately reported under the section 3.2 of the MR. The monitoring plan provide procedures for the collection and archiving of all relevant data necessary for estimation or measuring the emission reductions within the project boundary during the crediting period. This is checked through discussion with consultant and the project participant during the telephonic interview.

The VCS MR/05/ has been reviewed to check that the procedure for data uncertainty, emergency preparedness, roles and responsibility, operational and management structure are mentioned in the MR. The monitoring plan completely describes all measures to be implemented for monitoring of all parameters required. The monitoring plan described the positioning of the equipment. The information relating to the project implementation, provided in the Monitoring Report /05/ is consistent with that stated in the registered PD /01/, with the specific deviation properly documented under the MR.

The data and variables provided in the monitoring report are the same as stated in the registered PD/01/. Total emission reductions achieved under this monitoring period 01/11/2020 to 31/08/2021 (including both dates) is 252,058tCO₂e.

Assessment team concludes the following:

- a) There is no material discrepancies between project implementation and the project description provided in the registered PD/01/.
- b) The monitoring plan is implemented completely and monitoring system (i.e., process and schedule for obtaining, recording, compiling and analysing the monitored data and parameters) is appropriate. The change in monthly energy accounting & billing practice is acceptable as such change is not under the purview and control of PP. Additionally, such change Does not have any material impact on the project and level of assurance is reliable based on supporting documents.
- c) Thus, there are no material discrepancies between the actual monitoring system, and the monitoring plan set out in the project description and the applied methodology/09/.
- d) The GHG emission reductions or removals generated by the project have not included in an emissions trading program or any other mechanism that includes GHG allowance trading/18/.
- e) The project has not received or sought any other form of environmental credit, or has become eligible to do so since validation or previous verification/14/.
- f) The project is registered under VCS program

In view of the information's as verified above the assessment team is able to conclude that the project has been implemented as described in the project description.

4.2 Safeguards

4.2.1 No Net Harm

Being renewable Solar PV power generation project there is no negative environmental and socio-economic impacts; in fact project activity contributes positively by providing environment friendly power generation leading to sustainable development of the region. Also, the employment generation is a direct supporting uplifting the socio-economic status of the region.

These information related to social and sustainable development have been verified from the supporting documents/19,20/ submitted by PP.

Additionally, as per 'Central Pollution Control Board (Ministry of Environment & Forests, Govt. of India)', final document on revised classification of Industrial Sectors under Red, Orange, Green and White Categories (29/02/2016), it has been declared that solar project activity falls under the "White category". White Category projects/industries do not require any Environmental Clearance such as 'Consent to Operate' from PCB as such project Does not lead to any negative environmental impacts. Additionally, as per Indian Regulation (as described under the EIA

section of the registered PD) Environmental and Social Impact Assessment is not required for Solar Projects.

4.2.2 Local Stakeholder Consultation

The Project is already registered with VCS. No comment received during ongoing communication with local stakeholders. The Local Stakeholder Consultation Process was already conducted in-line with requirement during project registration with VCS. As a part of continuous feedback from stakeholders, there were no other major comments or protest raised by the stakeholders and they were totally in support for setting up of these kinds of projects in the region.

For ongoing communication, the PP has also placed a grievance register onsite where in the stakeholder can put down his/her complain and the same if found genuine will be addressed immediately. However, being renewable wind power generation project there is no feedback/grievance has been reported within this monitoring period and it is verified from the photographs provided by the PP.

4.3 AFOLU-Specific Safeguards

Not applicable.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

The project monitoring has been carried in accordance with the registered VCS PD/01/ and the monitoring report/05/. The monitoring plan laid in the registered PD/01/ is being followed at the site/18/. The assessment team has verified the information flow (from data generation, aggregation, to recording, calculation and reporting for these parameters including the values) in the MR/05/.

The emission reductions are purely based on the net electricity generated and exported from plant to grid. PP has provided all the sufficient data for current monitoring period. The values of the parameter $EG_{PJ,y}$ used in deriving the GHG emission reduction could be very well correlated between the data sets and ER spreadsheet/06/ provided by PP. The Net electricity supplied to the grid by the project activity has been reported in B-Forms, calculated by SRPC and also published in their official website as Regional Energy Account (REA). The monthly net energy units from REA are used for monthly billing purposes.

The VVB has verified as follows:

The calculation method used for net energy calculation in REA by SRPC is as follows:

Net Energy to be billed = [Export or net injection (kWh)] – [Import or drawl (kWh)] – [Transmission losses (kWh)]

Here, the Export value, Import and Transmission losses etc. are not separately reported in the monthly statement (B-Forms); SRPC conducts this monthly calculation and releases the net value with prescription of this particular accounting formula. Therefore, the value of "Net Energy billed" can be directly taken from the monthly statements. PP has adopted

the same practice, the monthly net generation values are properly reported under the ER sheet and specific description is also included for easy reference. Hence, the ER calculation is accurate, conservative and in line with the supporting documents.

Verification team has verified the monthly values of parameter ($EG_{PJ,y}$) as reported in the ER sheet with the source document (Monthly Regional Energy Account (REA) issued by SRPC), w.r.t. the above prescribed practices; and no discrepancy is observed, hence it can be confirmed that no manual transposition errors between data sets have been occurred. The verification of each monitoring parameter has been discussed later in section 4.5.

The calculation method and formulae used in calculating baseline emission is in compliance to the methodology used i.e. ACM0002 version 19/09/. Since project activity is a solar power project, leakage emission and project emission has been considered as zero.

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

Monitoring plan, has been verified to confirm that the actual monitoring complies with the monitoring plan, monitoring data has been thoroughly assessed and that the calibration requirements are met.

Parameter	Quantity of net electricity generation supplied by the project plant/unit to the grid in year yEG _{PJ, y} inMWh)	
Means of verification	Criteria/Requirements	Assessment/Observation
	Measuring /Reading /Recording frequency	The parameter is continuously monitored, hourly measured and monthly recorded.
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes. The reporting frequency is in line with the monitoring plan as outlined in the registered PD/01/ and monitoring methodology/10/.
	Monitoring equipment	Bidirectional electronic meters of accuracy class 0.2s are used.
	Is accuracy of the monitoring equipment as stated in the monitoring plan? If the monitoring plan Does not specify the accuracy of the monitoring equipment, Does the accuracy of the monitoring equipment comply with local/national standards, or as per the manufacturer's specification?	The accuracy of the monitoring equipment used to measure the values is 0.2s, which is as per the registered PD/01/ which is as per the norm defined in the PPA/13/.
	Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	Yes. The accuracy of monitoring equipment is valid for the entire range.
	Calibration frequency /interval:	Calibration frequency of the meters is once in 5 years.
	Is the calibration interval in line with the monitoring plan and/or methodology? If the monitoring plan Does not specify the frequency of calibration, is the selected frequency in accordance	Yes. The calibration frequency is in line with the monitoring plan as outlined in the registered PD/01/.
		VVB has verified that there was

	with the local/national standards, or as per the manufacturer's specifications?	change of energy meters during the current monitoring period. The information was reported in the MR, further verified against the meter replacement reports.
	Is the calibration of measuring equipment carried out by an accredited person or institution?	Yes the calibration is conducted by BESCO or directly under the provision of PGCIL. The calibration is conducted through NABL Accredited agencies under the direct control of the authority /07/.
	Is(are) calibration(s) valid for the whole reporting period?	Yes, the calibrations of meters are valid for the whole monitoring period.
	How were the values in the monitoring report verified?	Monthly value of the parameters for entire monitoring period is reported in the monitoring report and ER calculation sheet. The monthly values were verified from the monthly REA statements released by SRPC and corresponding invoices; and the same is found to be consistent. Value of this parameter for the current monitoring period was verified as 269,051.38MWh .
	If applicable, has the reported data been cross-checked with other available data?	The monthly reported values were further cross checked with the monthly invoices raised by the PP /08/ to state utility and found to be consistent.
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the adequate QA/QC procedures were implemented by all the stakeholders, namely, the Grid Authority (BESCO), the PP. The data transfer process for the said parameter is as follows: The Joint meter reading at all the metering points at DISCOM substation is taken by the representatives of BESCO in

		the presence of AvaadaSolarise Energy Private Limited (ASEPL)officials,in the form of monthly REA statements which areavailable online via SRPC official website. Based on the data recorded in the REA, electricity supplied to the grid by the project activity is calculated by SRPC respectively, using the apportioning procedure and energy breakup sheets for each project developer is prepared.	
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	No suchissues. Onlydeviation is applicable related to energy accounting practice in B-Forms and in the newly introduced monthly energy statements (REA); which are controlled and governed by stateutility, not at all under the control of PP. Also, verification team confirms that such change in accounting practice does not lead to any additional requirement of monitoring by PP, instead the new accounting practice directly produces and certifies Net Energy units for each month by the State utility, which is reliable and credible data. Hence, acceptable. Nevertheless, PP has reported this change in accounting practice transparently in the MR, further reviewed and accepted by VVB.	
Findings	CR #1 and CAR#1 were raised and resolved		
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The change in monthly energy		

	accounting and billing practice has been introduced by state authority which is not under the purview and control of PP or any project developer. However, such changes do not have any material impact on the project and results of ER. The information are found to be properly reported under the monitoring report with proper description and justification of deviation etc. Thus, VVB concluded that the monitoring results were recorded consistently as per the approved frequency in the monitoring plan, reporting is adequate and reliable.
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Parameters fixed ex ante:

EF_{grid, OM, y}; tCO₂e/MWh: it is the operating margin emission factor of Indian grid fixed at the time of project registration the mentioned value of 0.9610tCO₂e/MWh is consistent with the registered PD/01/.

EF_{grid, BM, y}; tCO₂e/MWh: it is build margin emission factor of Indian grid fixed at the time of project registration the mentioned value of 0.8644tCO₂e/MWh is consistent with the registered PD/01/.

EF_{grid, CM, y}; tCO₂e/MWh: it is the combined margin emission factor of Indian grid fixed at the time of project registration the mentioned value of 0.93684 tCO₂e/MWh is consistent with the registered PD/01/.

Calibration of meters:

During the verification assessment of the project activity, accuracy of all the metering have been checked and found appropriate. The installation and working conditions of the meters checked through latest photographs, calibration certificates and were found to be satisfactory. Details of meters are provided in below table:

Block 39	Main Meter	Check Meter	Stand by Meter
RR No: KSPDCL-R2-A73 (Line 03)			
S. No	LT-0780-A	LT-0786-A	17010111
Make	L&T	L&T	L&T
Accuracy Class	0.2s	0.2s	0.2s
Calibration Date	04/11/2019	04/11/2019	04/11/2019
Calibration Validity	03/11/2024	03/11/2024	03/11/2024
New Meter Details:			
S. No	-	-	LT-0931-A
Make			L&T
Accuracy Class			0.2s
Calibration Date			10 /01/2020
Calibration Validity			09 /01/2025
RR No: KSPDCL-R2-A74 (Line 04)	Main Meter	Check Meter	Stand by Meter
S. No	LT-0787-A	LT-0789-A	17010150
Make	L&T	L&T	L&T
Accuracy Class	0.2s	0.2s	0.2s
Calibration Date	04/11/2019	04/11/2019	04/11/2019
Calibration Validity	03/11/2024	03/11/2024	03/11/2024
New Meter Details:			

S. No	-	-	LT-0932-A
Make			L&T
Accuracy Class			0.2s
Calibration Date			10 /01/ 2020
Calibration Validity			09 /01/ 2025
Block 40A:			
RR No: KSPDCL-R2-A75 (Line 05)	Main Meter	Check Meter	Stand by Meter
S. No	LT-0806-A	LT-0791-A	17010143
Make	L&T	L&T	L&T
Accuracy Class	0.2S	0.2S	0.2S
Calibration Date	18/11/2019	18/11/2019	18/11/2019
Calibration Validity	17/11/2024	17/11/2024	17/11/2024
New Meter Details:			
S. No	-	-	LT-0933-A
Make			L&T
Accuracy Class			0.2s
Calibration Date			10 /01/ 2020
Calibration Validity			09 /01/ 2025
RR No: KSPDCL-R2-A76 (Line 6)	Main Meter	Check Meter	Stand by Meter
S. No	LT-0793-A	LT-0800-A	17010123
Make	L&T	L&T	L&T
Accuracy Class	0.2s	0.2s	0.2s
Calibration Date	18/11/2019	18/11/2019	18/11/2019
Calibration Validity	17/11/2024	17/11/2024	17/11/2024
New Meter Details:			
S. No	-	-	LT-0935-A
Make			L&T
Accuracy Class			0.2s
Calibration Date			10 /01/ 2020
Calibration Validity			09 /01/ 2025
Block 22	Main Meter	Check Meter	Stand by Meter
RR No: KSPDCL-T1-A83 (Line 09)			
S. No	LT-0830-A	LT-0837-A	16094016
Make	L&T	L&T	L&T
Accuracy Class	0.2s	0.2s	0.2s
Calibration Date	25/11/2019	25/11/2019	25/11/2019
Calibration Validity	24/11/2024	24/11/2024	24/11/2024
New Meter Details:			
S. No	-	-	LT-0943-A
Make			L&T
Accuracy Class			0.2s
Calibration Date			10 /01/ 2020
Calibration Validity			09 /01/ 2025
RR No: KSPDCL-T1-A84 (Line 10)	Main Meter	Check Meter	Stand by Meter
S. No	LT-0790-A	LT-0824-A	16093972
Make	L&T	L&T	L&T
Accuracy Class	0.2s	0.2s	0.2s
Calibration Date	25/11/2019	25/11/2019	25/11/2019
Calibration Validity	24/11/2024	24/11/2024	24/11/2024
New Meter Details:			
S. No	-	-	LT-0937-A

Make			L&T
Accuracy Class			0.2s
Calibration Date			10 /01/ 2020
Calibration Validity			09 /01/ 2025

Energy accounting: as per the provision of PGCIL, during the meter change period the B-form reflects the net Energy Billed as "Net Energy - 15% Import - Tr Loss" in kWh. There is no separate import value shown in the B-form. Therefore, during the period "Export" value itself is the net energy billed for the month. This change of practice has been accounted in the ER sheet and properly demonstrated.

Additionally, from January 2020, the SRPC (Southern Regional Power Committee) has affected an online practice of monthly energy accounting, termed as "Regional Energy Account" (REA). In this new practice, the project wise monthly net energy units are calculated by authority and uploaded under 'Regional Energy Account' for that month on the SRPC web site (www.srpc.kar.nic.in) to enable downloading of the monthly net energy units by respective constituents. Also, the REA accounting statement provides calculated value of net energy to be billed by PP; hence no separate export, import & transmission losses values are reflected. The net energy units are directly considered by PP for issuing the invoice.

Meters used to measure the parameters are of accuracy class 0.2s, as verified through calibration certificates/07/ and the photographs indicating the accuracy, make etc. The CEA Notification No. 502/70/CEA/DP&D dated 17/03/2006 and its amendments Notified on 26/06/2010 No. 502/6/2009/DP&D/D-I /11/ which is considered as national standard, mentions that for voltage of 650 V up to 33 KV, 0.5s accuracy class or above is recommended. Also, it notifies that all interface meters shall be tested at least once in five years.

Hence, the current applicable calibration validity, accuracy classes of 0.2s etc. for the energy meters installed at the project activity site are found to be appropriate.

The details of monitoring equipment are involved in the project activity and their calibration details/07/ are mentioned in the table under Appendix-1 of the VCS MR/05/.The electricity generation from project activity is metered at 66KV/220V KSPDCL substation 1 & substation 2. All the plants (including the project activity solar plant and other solar project developer's solar plants) are connected to their dedicated individual feeder at this substation. Feeder wise metering arrangements are available to each of the developers to quantify the electricity delivered to the substation by individual project developer.

The assessment team has verified the monthly B-Form/energy breakup reports issued by state utility and confirmed that only the data recorded through main meters is used to calculate net electricity supplied to the grid and consequently for ER calculations. As verified through the calibration certificates, there is no delay in calibration of main meters identified during the current monitoring period, hence it can be concluded that meters were working satisfactorily during the current monitoring period. The registered VCS PD/01/ & MR /05/ and meter photographs confirm that the metering equipment are sealed and maintained by the state utility.

In view of the above discussion the assessment team able to confirm that evidence used to determine the GHG reductions and removals are sufficient and appropriate with respect to quality and quantity.

GHG Calculations:

The emission reduction as per the applied methodology equals the baseline emissions (project emissions and leakage emissions for such project activities is considered zero). The formula provided for the calculation of baseline emissions is:

$$BE_y = EG_{PJ, y} * EF_{grid, CM, y}$$

Where:

$EF_{grid, CM, y}$: 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” (tCO₂/MWh) (i.e., 0.93684 tCO₂/MWh).

$EG_{PJ, y}$: Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the project activity in year y (MWh/yr)

BE_y : Baseline emissions in year y (tCO₂e/yr).

Thus,

$$\begin{aligned} BE_y &= 269,051.38 \text{ MWh} * 0.93684 \text{ tCO}_2/\text{MWh} \\ &= 252,058 \text{ tCO}_2\text{e (rounded down value has been considered by PP)} \end{aligned}$$

The verification team confirms that appropriate methods and formulae for calculating baseline emissions have been followed. The assumptions, emission factors and default values that were applied in the calculations are justified. The actual emission reduction achieved during the current monitoring period are 1.06 % lower than the estimated amount of emission reductions at the time of validation, this is because of lower generation achieved for a few months during the monitoring period. However, such lower generation are due to less availability of solar radiation which is not in control of PP.

It is to be noted that PLF is completely governed by the availability of solar radiation, which is natural phenomenon and same is beyond the control of PP, hence the assessment team has concluded the decrease in emission reduction of the project activity is justified and acceptable.

All the data were made available and have been monitored as per required monitoring frequency. The means of verification for the values of parameters, used for baseline emission calculation, is described above.

4.6 Non-Permanence Risk Analysis

Not applicable for the project activity.

5 VERIFICATION CONCLUSION

LGAI Technological Center, S.A. (also referred to as Applus+ Certification), contracted by WeAct Pty. Ltd. to perform the independent verification of the emission reductions for the VCS project activity (VCS ID- 2017) “Karnataka Pavagada-II Solar Project by Avaada (150 MW)” in India for the monitoring period 01/11/2020 – 31/08/2021 as reported in the final Monitoring Report Version 03 dated 16/01/2022 and final ER Sheet version 02, dated 21/12/2021. WeAct Pty. Ltd. is responsible for the collection of data in accordance with the monitoring plan and the reporting of GHG emissions reductions from the project activity.

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

Applus+ Certification commenced the verification on the basis of the baseline and monitoring methodology ACM0002 version 19, the monitoring plan contained in the registered VCS PD Version 2.1, dated 21/12/2019 under VCS version 3.0 (template ver 3.3), Monitoring Report Version 03 dated 16/01/2022 (under VCS version 4.0) as per the process described under Section 2 of this report.

Applus+ Certification 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. Applus+ Certification planned and performed the verification by obtaining evidences and other information based on remote assessment, interviews, desk review and explanations that Applus+ Certification considered necessary to give reasonable assurance that reported GHG emission reductions are fairly stated, accurate and verifiable.

In our opinion, the GHG emissions reductions reported for the project activity for the period 01/11/2020 – 31/08/2021 are fairly stated in the Monitoring Report Version 03 dated 16/01/2022, corresponding to the ER calculation sheet, version 02 dated 21/12/2021. The GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology ACM0002 version 19, and the VCS standard. Thus, a total net Emission Reductions verified and certified under this report is 252,058 tCO₂e, corresponds to the monitoring period “01/11/2020 – 31/08/2021” (both dates included).

Summary:

Verification period: From 01/11/2020 – 31/08/2021 (including both dates)

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)
2020 (01-Nov-2020 to 31-Dec-2020)	45,489	0	0	45,489
2021 (01-Jan-2021 to 31-Aug-2021)	206,569	0	0	206,569
Total	252,058	0	0	252,058

APPENDIX 1: DOCUMENT REFERENCES

S.No	Title of Document	Version	Date
1.	Registered VCS PD(VCS version 03)	2.1	21/12/2019
2.	VCS Validation Report, prepared by Earthood Services Private Limited	1.0	23/12/2019
3.	VCS Verification report of 1st monitoring period (08/11/2019 to 31/10/2020)	01	24/02/2021
4.	VCS Monitoring Report	01	11/11/2021
5.	VCS Monitoring Report (Final)	03	16/01/2022
6.	ER spread sheet (corresponding to the final monitoring report)	02	21/12/2021
7.	Certificates of Calibration for all the meters belong to project activity. Meter change/replacement report applicable to the project activity.	Covering the entire period 01/11/2020 to 31/08/2021	-
8.	Invoice issued by PP to state DISCOM	for the period 01/11/2020 to 31/08/2021	-
9.	Monthly Regional Energy Account (REA) issued by SRPC	Applicable for the period 01/11/2020 to 31/08/2021	-
10.	"Consolidated baseline methodology for grid-connected electricity generation from renewable sources", ACM0002,	Version 19	-
11.	CEA Database	version 14	Dec 2018
12.	Commissioning certificates for all the Solar Plant of the project activity issued by state electricity authority (for all 3 blocks)	-	-
13.	Power Purchase Agreements signed between Project Proponent and state authority BESCO	-	-
14.	VCS webpage for the project, VCS ID 2017; https://registry.verra.org/app/projectDetail/VCS/2017	-	Last accessed on 05/02/2022
15.	Letter of declaration dated from PP regarding not having created or sought any other form of environmental credit for the same period	-	-
16.	Central Electricity Authority (Installation and Operation of Meters) Regulations Notified on 17/03/2006 No. 502/70/CEA/DP&D Amendments Notified on 26/06/2010 No. 502/6/2009/DP&D/D-I	-	-
17.	VCS Standard	Version 4.1	22/04/2021
18.	VCS Program Guide	Version 4.0	19/09/2019
19.	Latest photographs of SCADA system, Solar Plant, transformers, grievance register and energy meters installed at site	-	-
20.	Employment details, attendance sheets etc.	-	-
21.	Documentary evidence related to Social & Sustainable Development activities conducted by Avaada group in and around the project region.	-	-

S.No	Title of Document	Version	Date
22.	Proof of notification communication by SRPC related to change in monthly energy accounting via REA	-	-

APPENDIX 2: COMPETENCY STATEMENT

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

The composition of audit team shall be approved by the Applus+ Certification ensuring that the required skills are covered by the team.

The four qualification levels for team members that are assigned by formal appointment rules are as presented below:

- Lead Auditor (LA).
- Auditor (A) / Auditor in Training (AiT).
- Technical Expert (TE).
- Technical Reviewer (TR).

The sectoral scope / technical area knowledge linked to the applied methodology/ies shall be covered by the assessment team.

Name	Qualification	Coverage of scope	Coverage of technical Area	Financial aspect	Host country Experience	Attendance to the Assessment
Vivek Kumar Ahirwar	Lead Auditor (LA)	Yes (1)	Yes (1.2)	N/A	Yes	Yes
Vivek Kumar Ahirwar	Technical Expert (TE)	Yes (1)	Yes (1.2)	N/A	Yes	Yes
Simon Shen	Technical Reviewer (TR)	Yes (1)	Yes (1.2)	N/A	N/A	N/A

The curricula vitae of the VVB's team members are provided below:

Vivek Kumar Ahirwar is a BEE-Certified Energy Auditor by Govt of India with over eight years of relevant experience in energy efficiency, energy audit, thermal and electrical energy generation technology from renewable source and energy conservation in energy intensive industries, designated consumers and commercial buildings, implementation of energy conservation building codes, research, process and green building projects. He is a certified lead auditor for ISO 14001 EMS and 14064. He has experience under various categories of projects stating from renewable to waste to supercritical projects and WCD. He has successfully audited more than 100 GHG (CDM/VCS/GS) projects in different states across the India. He has done Mater in Technology (Energy Management) from a

premier institute, School of Energy & Environmental Studies, DAVV, Indore (M.P.), India and Bachelor of Engineering (Mechanical Engineering) from Govt. Engineering college, Rewa, RGPV, India.

Simon Shen (Master degree in thermal energy engineering, bachelor degree in environmental engineering) is a lead auditor appointed by Applus+ certification for the GHG project assessment. He is based in Shanghai. He has several years of work experience in environmental protection field. Before he joined Applus+ certification, he had been worked for TÜV SÜD as a GHG validator/verifier and ISO 9001/14001 lead auditor for 3.5years.

APPENDIX 3: ABBREVIATIONS

Abbreviations	Full texts
ASEPL	Avaada Solarise Energy Private Limited
ABT	Availability Based Tariff
BEF	Baseline Emission Factor
BM	Build Margin
CAR	Corrective Action Request
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CL	Clarification Request
CMS	Central Monitoring System
CMP	Conference of Parties Serving as Meeting of Parties
CO ₂	Carbon dioxide
DISCOM	Distribution Company
EB	Executive Board
EPC	Engineering, Procurement and Construction
BESCOM	Bangalore Electricity Supply Company Ltd.
FAR	Forward Action Request
GHG	Green House Gas
ISO	International Standards Organization
KSPDCL	Karnataka Solar Power Development Corporation Limited
kW	Kilowatt
kWh	Kilowatt hour
MFR	Multi-Function Relay
MR	Monitoring Report
MW	Megawatt
MWh	Megawatt-hour
O&M	Operation and Maintenance
PD	Project Description
PGCIL	Power Grid Corporation of India Ltd.
PLF	Plant Load Factor
PP	Project Proponent
PPA	Power Purchase Agreement
QA/QC	Quality Assurance and Quality Control
TOD	Time of the Day
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Voluntary Carbon Standard
VCSA	Voluntary Carbon Standard Association
VCS PD	VCS Project Description
VCUs	Voluntary Carbon Units

APPENDIX 4: FINDINGS OVERVIEW

Findings Overview Summary

Type	CAR	CR	FAR
Total Number raised	03	07	00

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

FAR ID	N/A	Section no.	N/A	Date :N/A
Description of FAR				
N/A				
Project participant response				Date :
N/A				
Documentation provided by project participant				
N/A				
VVB assessment				Date:
N/A				

Table 1. CR from this verification

CR ID	01	Section no.	MR	Date :10/12/2021
Description of CR				
PP is requested to provide:- 1. The commissioning certificates for all 3 blocks to VVB for verifying the commissioning dates of energy meter. 2. The reference document for verifying the formula mentioned here and in ER sheet for calculating the net energy to be billed. 3. The reference documents of sustainable development referred in the footnote 6 4. To submit the copy of grievance / feedback register to VVB for the current monitoring period. 5. To provide the supporting documents to verify the technical details of equipments installed. 6. The breakdown/Tripping details for the project w.r.t. the current monitoring period, for both the projects.				
Project participant response				Date :21/12/2021

1. PP is hereby submitting the commissioning certificates for all 3 blocks to the assessment team for verifying the commissioning dates of energy meters.
2. PP would like to clarify that REA statement provides only the net electricity supplied by the project activity but the formulae used to evaluate the net electricity is not specified in the REA statement. Furthermore, regarding the technology employed by the SRPC (GOI) has the state of art to account the net electricity injection, drawal and transmission losses with the help of the special meter which are connected to the automated meter reading system which has the data algorithms-based programming software.

(http://www.srpc.kar.nic.in/website/2021/meetings/special/rn_ts_amr_080421.pdf)

As per the SRPC document available to public “Annexure-II: Technical Specification for Interface Energy Meters, Automated Meter Reading System and Meter Data Processing for Inter State Transmission System” Page 36, transparently explains that “Activities to be carried out by the software can be broadly classified” as follows:

- Uploading Meter data in database
- Validation of Meter Data
- **Computation of net injection, drawal and transmission losses**
- Accounting
- Reporting

Thus, it is apparent from the technical specifications specified by the SRPC that injection, drawal and transmission losses are accounted but based on the algorithms incorporated in the Software module. Hence, MR has been revised to mention the simplified formulae as per the logic discussed above and explained by SRPC.

i.e. Net Energy to be billed = Export/net injection (kWh) – Import/drawal (kWh) – Transmission losses (kWh).

3. PP is hereby submitting the reference documents of sustainable development referred in the footnote 6 of the MR.
4. PP is hereby submitting the copy of grievance / feedback register pages to the assessment team for the current monitoring period.
5. PP is hereby submitting the commissioning certificate & technology data sheet as supporting documents to verify the technical details of equipments installed.
6. PP is hereby submitting the breakdown/tripping details for the project w.r.t. the current monitoring period, for both the projects.

Documentation provided by project participant

1. MR version 03
2. Commissioning certificates for all 3 blocks
3. SRPC document
4. Supporting documents for sustainable development
5. Copy of grievance / feedback register pages
6. Commissioning certificate & technology data sheet

VWB assessment

Date: 19/01/2022

Assessment team confirms that PP has submitted all the listed documents to VVB and they are found to be consistent with the information presented in MR version 3 and ER version 02 provided. Hence accepted.

CR #01 is Closed

CR ID	02	Section no.	1	Date : 10/12/2021
Description of CR				
PP is requested to clarify if they are considering 2,52,058 tCO ₂ e or 2,52,057 tCO ₂ e as total ERs for current monitoring period in section 1.1 of MR version 01.				
Project participant response				Date :21/12/2021
MR has been revised to report the “Emission Reduction” achieved during the current monitoring period consistently throughout the MR as 2,52,058 tCO ₂ e.				
Documentation provided by project participant				
MR version 03				
VVB assessment				Date: 19/01/2022
Assessment team confirms that PP has revised the MR and incorporated correct value in the revised MR provided to VVB. Hence accepted.				
CR #02 is Closed				

CR ID	03	Section no.	4	Date : 10/12/2021
Description of CR				
PP is requested to clarify if they have provided the correct calibration records of all energy meters to VVB as date of calibration and meter serial numbers are found to be in consistent with the provided records in section 4.3 of MR version 01.				
Project participant response				Date :21/12/2021

PP is hereby submitting the meter installation/calibration & replacement certificate along with the revised set of documents pertaining to the current monitoring period. PP would like to clarify that there is no delay in meter calibration has happened for the main meter & check meter which is used for the generation of monthly REA statement.

However, there is replacement of Standby Meter has happened during the current monitoring period but that does not impact the procedure of REA monthly statement generation as the standby energy meters are not used for the preparation of monthly electricity delivered to the grid.

Documentation provided by project participant

Meter Calibration/installation certificate

VVB assessment

Date: 19/01/2022

Assessment team confirms that PP has provided the latest calibration certificates to VVB and they are found to be consistent with the revised MR version 03 provided to VVB. Hence accepted.

CR #03 is Closed

CR ID	04	Section no.	MR	Date : 10/12/2021
Description of CR				
During the site visit it was observed that the Standby meters installed at generation end are different than the serial number mentioned in the MR. Kindly clarify				
Project participant response				Date :21/12/2021
MR has been revised to update the information regarding the installation of new Standby meters along with the details. Also, a footnote is provided that the replacement of standby meter does not have any impact on generation or emission reduction since Main meter & Check meter are primarily responsible for the delivered electricity measurement & recording and standby meter are not used on monthly basis for REA statement. It is used as fail-safe backup arrangement in the event when both the Main & Check Meters are found faulty & nonfunctional.				
Documentation provided by project participant				
Stand By meter installation/Calibration certificate				
VVB assessment				Date: 19/01/2022

Assessment team confirms that PP has provided the latest standby meter installation and calibration certificates to VVB and they are found to be consistent with the revised MR version 03 provided to VVB. Hence accepted.

CR #04 is Closed

CR ID	05	Section no.	1	Date : 10/12/2021
Description of CR				
PP is requested to clarify how the tools for demonstration of additionality and investment analysis is applicable in section 1.8 of MR version 01.				
Project participant response				Date :21/12/2021
MR has been revised to remove the irrelevant information & tools pertaining the monitoring & verification of the project activity.				
Documentation provided by project participant				
MR Version 03				
VVB assessment				Date: 19/01/2022
Assessment team confirms that PP has now removed the inapplicable tool from the revised MR version 03 and provided an explanation as well which is found satisfactory. Hence accepted.				
CR #05 is Closed				

CR ID	06	Section no.	4	Date : 10/12/2021
Description of CR				
PP is requested to clarify, which authority is responsible for meter calibration as it is found in consistent with the calibration report provided to VVB in section 4.3 of MR version 01.				
Project participant response				Date :21/12/2021

PP would like to clarify that there is no inconsistency in nomination of authority for meter calibration as referred under the section 4.3 of the MR. The para “Calibration of monitoring equipment” under the section 4.3 prescribes “DISCOM”, which means Distribution Company and in this project the Discom is “Bangalore Electricity Supply Company Ltd” (BESCOM). This name of Discom can be verified from the calibration certificates.	
Documentation provided by project participant	
MR version 03 Calibration Certificates	
VVB assessment	Date: 19/01/2022
Assessment team confirms that PP has clarified to VVB that there is no inconsistency in using DISOM as an authority and it is found consistent with the calibration certificates provided to VVB. Hence accepted. CR #06 is Closed	

CR ID	07	Section no.	ER	Date : 10/12/2021
Description of CR				
PP is requested to clarify the inconsistency found in version number of the tool applied in “Ref-Combined margin- EF”.				
Project participant response				Date : 21/12/2021
MR has been revised to maintain the consistency in reporting the version number of the tool applied in “Ref-Combined margin-EF”.				
Documentation provided by project participant				
MR version 03				
VVB assessment				Date: 19/01/2022
Assessment team confirms that PP has revised version number of the tool applied in the revised MR version 03 provided to VVB. Hence accepted. CR #07 is Closed				

Table 2. CAR from this verification

CAR ID	01	Section no.	4	Date : 10/12/2021
Description of CAR				
PP is requested to mention the version of the tool applied in section 4.1 of MR version 01				
Project participant response				Date :21/12/2021
MR has been revised to mention the version no of the tool applied in section 4.1.				
Documentation provided by project participant				
MR version 03				
VVB assessment				Date: 19/01/2022
Assessment team confirms that PP has applied the correct version number of the tool in the revised MR version 03 provided to VVB. Hence accepted.				
CAR #01 is Closed				

CAR ID	02	Section no.	MR	Date : 10/12/2021
Description of CAR				
PP is requested to provide a working link in section3.2 and 4.1 of MR version 01				
Project participant response				Date :21/12/2021
MR has been revised to provide a working link in section 3.2 & 4.1.				
Documentation provided by project participant				
MR Version 03				
VVB assessment				Date: 19/01/2022
Assessment team confirms that PP has revised the MR and provided a correct working link in section 3.2 & 4.1in the revised MR version 03 provided to VVB. Hence accepted.				
CAR #02 is Closed				

CAR ID	03	Section no.	5	Date : 10/12/2021
Description of CAR				

PP is requested to do use non italic font in section 5.4 of MR and make it consistent with the MR template version 4.0	
Project participant response	Date :21/12/2021
MR has been revised to remove the italic font in section 5.4 & made it consistent with MR template filling guideline.	
Documentation provided by project participant	
MR version 03	
VVB assessment	Date: 19/01/2022
Assessment team confirms that PP has revised the MR and removed the italic font in section 5.4 & made it consistent with MR template filling guideline in the revised MR version 03 provided to VVB. Hence accepted.	
CAR #03 is Closed	

Table 3.FAR from this verification

FAR ID	N/A	Section No.	N/A	Date: N/A
Description of FAR				
N/A				
Project participant response				Date: N/A
N/A				
Documentation provided by project participant				
N/A				
VVB assessment				Date: N/A
N/A				