



## Pavagada Solar Renewable Power Project by Greenko Group

Document Prepared By Earthood Services Private Limited

|                      |                                                         |
|----------------------|---------------------------------------------------------|
| <b>Project Title</b> | Pavagada Solar Renewable Power Project by Greenko Group |
| <b>Version</b>       | 02                                                      |
| <b>Report ID</b>     | ESPL number -19.57                                      |

|                      |                                                                                                                                                                                                                                                                                              |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Report Title</b>  | Pavagada Solar Renewable Power Project by Greenko Group                                                                                                                                                                                                                                      |
| <b>Client</b>        | SEI Suryashakti Power Private Limited                                                                                                                                                                                                                                                        |
| <b>Pages</b>         | 34                                                                                                                                                                                                                                                                                           |
| <b>Date of Issue</b> | 25/June /2020                                                                                                                                                                                                                                                                                |
| <b>Prepared By</b>   | Earthood Services Private Limited                                                                                                                                                                                                                                                            |
| <b>Contact</b>       | Regd. Office: 409-410, Tower B4, Spaze I-Tech Park, Sector 49, Sohna Road, Gurgaon- 122018, INDIA<br><br>Tel: +91 124 4204599<br><br>Fax: +91 124 4204599<br><br>Website: <a href="http://www.earthood.in">www.earthood.in</a> Email: <a href="mailto:info@earthood.in">info@earthood.in</a> |
| <b>Approved By</b>   | Kaviraj Singh<br><br>Managing Director                                                                                                                                                                                                                                                       |

### Work Carried Out By

Team Leader: Mr. Sukanta Das  
 Technical Expert (1.2): Mr. Sukanta Das  
 Methodology Expert: Mr. Sukanta Das  
 Verifier: Mr. Sukanta Das  
 Technical Reviewer: Anshika Gupta  
 Technical Expert: Anshika Gupta

### Summary:

Earthood has performed the VCS 2<sup>nd</sup> verification of the project “Pavagada Solar Renewable Power Project by Greenko Group” (VCS Ref. Number 1791).

The scope of verification includes confirming the implementation of the monitoring plan of the registered VCS PD (version 02) and the application of the monitoring methodology Approved consolidated baseline and monitoring methodology ACM0002: Grid-connected electricity generation from renewable sources - Version 18.1<sup>1</sup>

The verification is consisted of three phases: i) desk review of the project; ii) follow-up onsite visit and interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final verification report and opinion. The overall verification, from Contract Review to Verification Report & Opinion, was conducted following Earthood internal quality procedures.

Assessment team during the onsite visit confirm that the project activity involves installation of a bundle 30 MW \*3 =90 MW solar power project in Karnataka state of India.

The details of the project and their location of installation are mentioned in the table below:-

| Name of Investor                      | Capacity in MW | COD <sup>2</sup> = Date of commissioning | Connection with Grid | State     | Usage                |
|---------------------------------------|----------------|------------------------------------------|----------------------|-----------|----------------------|
| SEI Suryashakti Power Private Limited | 30 MW          | 30/03/2017                               | Indian Grid          | Karnataka | Sale to State Discom |
| SEI Bheem Private Limited             | 30 MW          | 30/03/2017                               |                      |           |                      |
| SEI Aditi Power Private Limited       | 30 MW          | 30/03/2017                               |                      |           |                      |

During the Current Monitoring Period from 01-August-2018 to 01-October-2019 (First and last date

<sup>1</sup> <http://cdm.unfccc.int/methodologies/DB/5725LCHYPYM4I1V80D9SFYVAMFFWNP>

<sup>2</sup> Assessment team checked the commissioning certificate and confirm that installed capacity on-site is as per the details mentioned in the registered VCS PD.

included), project activity supplied 148517.11 MWh of electricity, and thus contributing to the GHG reductions 140,717 tCO<sub>2</sub>e.

During the verification process 05 CARs, 00 CL and 00 FARs were raised and are discussed in detail in Appendix 4. Therefore, the emission reductions from the project activity “Pavagada Solar Renewable Power Project by Greenko Group” during the period 01-August-2018 to 01-October-2019 (including both days) could be verified.

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 01-August-2018 to 01-October-2019 are fairly stated in the Monitoring Report Version 02 dated 06/03/2020/2/. The GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology ACM 0002 version 18.1/7/, and the standard/13/.

Vintage wise representation of the emission reductions is as follows:

| Year  | VCUs    |
|-------|---------|
| 2018  | 22,935  |
| 2019  | 117,782 |
| Total | 140,717 |

|          |                                                                       |           |
|----------|-----------------------------------------------------------------------|-----------|
| <b>1</b> | <b>Introduction</b>                                                   | <b>6</b>  |
| 1.1      | Objective                                                             | 6         |
| 1.2      | Scope and Criteria                                                    | 6         |
| 1.3      | Level of Assurance                                                    | 6         |
| 1.4      | Summary Description of the Project                                    | 7         |
| <b>2</b> | <b>Verification Process</b>                                           | <b>9</b>  |
| 2.1      | Method and Criteria                                                   | 9         |
| 2.2      | Document Review                                                       | 9         |
| 2.3      | Interviews                                                            | 10        |
| 2.4      | Site Inspections                                                      | 10        |
| 2.5      | Resolution of Findings                                                | 11        |
| 2.5.1    | Forward Action Requests                                               | 12        |
| 2.6      | Eligibility for Validation Activities                                 | 12        |
| <b>3</b> | <b>Validation Findings</b>                                            | <b>12</b> |
| 3.1      | Participation under Other GHG Programs                                | 12        |
| 3.2      | Methodology Deviations                                                | 12        |
| 3.3      | Project Description Deviations                                        | 12        |
| 3.4      | Grouped Project                                                       | 12        |
| <b>4</b> | <b>Verification Findings</b>                                          | <b>13</b> |
| 4.1      | Project Implementation Status                                         | 13        |
| 4.2      | Safeguards                                                            | 14        |
| 4.2.1    | No Net Harm                                                           | 14        |
| 4.2.2    | Local Stakeholder Consultation                                        | 14        |
| 4.3      | AFOLU-Specific Safeguards                                             | 14        |
| 4.4      | Accuracy of GHG Emission Reduction and Removal Calculations           | 15        |
| 4.5      | Quality of Evidence to Determine GHG Emission Reductions and Removals | 15        |
|          | Parameters fixed ex ante:                                             | 18        |
|          | Calibration of meters:                                                | 18        |
|          | GHG Calculations                                                      | 18        |
| 4.6      | Non-Permanence Risk Analysis                                          | 20        |
| <b>5</b> | <b>Verification conclusion</b>                                        | <b>20</b> |

|                                          |           |
|------------------------------------------|-----------|
| <b>APPENDIX 1: References</b>            | <b>22</b> |
| <b>APPENDIX 2: Competency Statement</b>  | <b>24</b> |
| <b>APPENDIX 3: Abbreviations</b>         | <b>25</b> |
| <b>APPENDIX 4: Verification Findings</b> | <b>26</b> |

# 1 INTRODUCTION

## 1.1 Objective

SEI Suryashakti Power Private Limited has Contracted Earthood Services Private Limited (Earthood) to perform 2<sup>nd</sup> VCS verification of the “Pavagada Solar Renewable Power Project by Greenko Group” (hereafter called project) for the monitoring period 01-August-2018 to 01-October-2019 with VCS Ref number 1791. The objective of this verification is a thorough and independent verification for the emission reductions reported for “Pavagada Solar Renewable Power Project by Greenko Group” and managed by SEI Suryashakti Power Private Limited.

The verification is the periodic independent review and ex post determination by Earthood Services private limited of the monitored reductions in GHG emissions that have occurred as a result of the registered VCS project activity during a defined monitoring period. Certification is the written assurance by Earthood that, during a specific period in time, a project activity achieved the emission reductions as verified.

## 1.2 Scope and Criteria

The scope of the verification is to establish and verify that;

- a) The project activity has been implemented and operated as per the registered PD/1/, and that all physical features/2/,/10/ (technology, project equipment, and monitoring and metering equipment) of the project are in place;
- b) The monitoring report/2/ and other supporting documents provided are complete in accordance with the latest applicable version of the completeness checklist for requests for issuance of VERs, verifiable, and in accordance with applicable VCS standard 4.0;
- c) The actual monitoring systems and procedures comply with the monitoring systems and procedures described in the monitoring plan, any revised approved monitoring plan, the approved methodology including applicable tool(s) and/or, where applicable, the approved standardized baseline;
- d) The data recorded and stored as per the monitoring methodology including applicable tool(s) and, where applicable, the standardized baseline

## 1.3 Level of Assurance

A draft verification report that is prepared by assessment team will be reviewed by an independent technical review team (one or more members) to confirm if the internal procedures established and implemented by Earthood were duly complied with and such opinion/conclusion is reached in an objective manner that complies with the applicable VCS and CDM (Clean Development Mechanism) requirements as appropriate. The technical review team is collectively required to possess the

technical expertise of all the technical area/sectoral scope the project activity relates to. All team members of technical review team are independent of the validation team. The report approved by Quality Manager is endorsed by Managing Director, who is overall responsible to ensure quality, before final release. The further details of applicable procedures and responsibilities about Earthood Quality Management System (QMS) are available on its website ([www.earthood.in](http://www.earthood.in)).

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 01-August-2018 to 01-October-2019 are fairly stated in the Monitoring Report Version 03 dated 25/06/2020 <sup>/2/</sup>. The GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology ACM 0002 version 18.1<sup>/7/</sup>, and the standard<sup>/13/</sup>.

## 1.4 Summary Description of the Project

Assessment team during the onsite visit confirm that the project activity involves installation of a 3\*30 MW= 90 MW solar power project in Karnataka state of India. No change in project capacity or technical equipment change is envisaged for the present verification. The project activity, by supplying cleaner power to grid has reduced CO<sub>2</sub> emissions, which would have otherwise been generated by thermal power plants. This project activity therefore has environmental benefits in terms of reduction in carbon emissions and coal resource conservation. Assessment team during the physical verification of the project activity confirms that the project technical description as mentioned in the registered PD is implemented onsite. There is no technical change in the equipment details as per the registered VCS PD. The technical detail of the Installed solar power plant is as follows:

(i) Technical specification of 30 MW solar project by SEI Suryashakti Power Private Limited

| Sl. No. | Technical details of the equipment                | Description                                                                                                                                         |
|---------|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | Technology Used                                   | Solar PV technology (Poly-Crystalline)                                                                                                              |
| 2       | Module Make, Number of modules and their capacity | Make- JA Solar Risen Energy RENO<br>No. of Modules- 5754 for 310 Wp, 48636 for 315 Wp, 42080 for 320 Wp<br>Module Capacity- 310 Wp, 315 Wp & 320 Wp |
| 3       | Number of Inverters , Inverter Make & Model       | 40 Inverters<br>TMEIC-PVL0750 E(750 KW) – 40 nos                                                                                                    |
| 4       | Tilt                                              | Tracking                                                                                                                                            |

(ii) Technical specification of 30 MW solar project by SEI Bheem Private Limited

| Sl. No. | Technical details of the equipment | Description |
|---------|------------------------------------|-------------|
|---------|------------------------------------|-------------|

|   |                                                   |                                                                                                                   |
|---|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| 1 | Technology Used                                   | Solar PV technology (Poly-Crystalline)                                                                            |
| 2 | Module Make, Number of modules and their capacity | Make- JA Solar Risen Solar Technology<br>Total No. of Modules- 97,020<br>Module Capacity- 310 Wp, 315 Wp & 320 Wp |
| 3 | Number of Inverters , Inverter Make & Model       | 40 Inverters<br>TMEIC-PVLO750 E(750 KW) – 40 nos                                                                  |
| 4 | Tilt                                              | Tracking                                                                                                          |

(iii) Technical specification of 30 MW solar project by SEI Aditi Power Private Limited

| Sl. No. | Technical details of the equipment                | Description                                                                                            |
|---------|---------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| 1       | Technology Used                                   | Solar PV technology (Poly-Crystalline)                                                                 |
| 2       | Module Make, Number of modules and their capacity | Make- JA Solar Risen Energy RENO<br>No. of Modules- 95,547<br>Module Capacity- 310 Wp, 315 Wp & 320 Wp |
| 3       | Number of Inverters , Inverter Make & Model       | 40 Inverters<br>TMEIC-PVLO750 E(750 KW) – 40 nos                                                       |
| 4       | Tilt                                              | Tracking                                                                                               |

The power plant is located on the geo-coordinates as described below and confirm via GPS meter during onsite visit: /16/.

| Name of Investor                      | Capacity (MW) | Village(s)              | Tehsil / Mandal | District | State     | Latitude (N)     | Longitude (E)    |
|---------------------------------------|---------------|-------------------------|-----------------|----------|-----------|------------------|------------------|
| SEI Suryashakti Power Private Limited | 30 MW         | Kamballahalli           | Pavagada        | Tumkur   | Karnataka | 14° 12' 18.9648" | 77° 22' 48.2340" |
| SEI Bheem Private Limited             | 30 MW         | Upparahalli & Agalwadke | Pavagada        | Tumkur   | Karnataka | 14° 11' 33.8460" | 77° 20' 46.1688" |

|                                          |       |            |          |        |           |                     |                     |
|------------------------------------------|-------|------------|----------|--------|-----------|---------------------|---------------------|
| SEI Aditi<br>Power<br>Private<br>Limited | 30 MW | Pallavalli | Pavagada | Tumkur | Karnataka | 14° 08'<br>26.2104" | 77° 18'<br>54.5796" |
|------------------------------------------|-------|------------|----------|--------|-----------|---------------------|---------------------|

Assessment team during the onsite visit confirm that the technology employed, is environment friendly technology since there are no GHG emissions associated with the electricity generation<sup>/9/</sup>.

The commissioning details of the power plant mentioned in MR/<sup>2/</sup> was verified from the commissioning certificates provided/<sup>10/</sup> by the PP. Technical description was found to be consistent with the on-site observation/<sup>9/</sup> and registered VCS PD/<sup>1/</sup>.

## 2 VERIFICATION PROCESS

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

### 2.1 Method and Criteria

The overall verification, from Contract Review to Verification Report & Opinion, was conducted using Earthood internal procedures.

The project was verified against the latest requirements and guidance set out in VCS standard 4.0 and CDM project cycle procedure 2.0.

No sampling approach has been applied by the verification team as all the monthly reported figures in the MR/<sup>2/</sup> and the ER sheet/<sup>3/</sup> were checked from the actual records.

### 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, MR, validation report) and information from sources other than those used, if available, and also conducts independent background investigations. Earthood conducted a desk review as under;

- A review of the data and information presented to verify their completeness.
- A review against VCS standard version 4.0, CDM project Cycle procedure for project activities version 2.0 and CDM validation and verification standard for project activities version 2.0
- 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.

- d) 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

Earthood performed an on-site visit and interviews on 04/03/2020 with project stakeholders to confirm selected information and to resolve issues identified in the document review. During the on-site visit, the PP representatives of were interviewed<sup>/9/</sup>.

| No. | Interviews  |                 |                   | Date       | Subject                                                                                           | Team Member     |
|-----|-------------|-----------------|-------------------|------------|---------------------------------------------------------------------------------------------------|-----------------|
|     | Last Name   | First Name      | Affiliation       |            |                                                                                                   |                 |
| 1.  | Raju M      | Murali Krishnam | PP representative | 04/03/2020 | Project implementation, Equipment's, Operation and maintenance, JMR, Calibration etc.             | Mr. Sukanta Das |
| 2.  | Thippeswamy | TH              | Plant In charge   | 04/03/2020 | Plant operational related data, like plant efficiency, module efficiency, break down details etc. | Mr. Sukanta Das |

In addition, the location specified for the plant was verified from the registered PD<sup>/1/</sup> along with the help of mobile GPS<sup>/16/</sup>. The operation of the power plant was checked through the JMRs<sup>/6/</sup> issued from the government authorities. Based on the site visit and desk review, the verification team is sufficiently confident of the implementation of the project activity as per registered PD<sup>/1/</sup>.

## 2.4 Site Inspections

A site visit was undertaken by assessment team on 04/03/2020 to carry out following;

- a. An assessment of the implementation and operation of the registered project activity as per the registered PD<sup>/1/</sup>.
- 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<sup>/1/</sup>.
- d. A cross-check between information provided in the monitoring report and data from other sources such as invoices.

- 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.

Technical descriptions as seen on site was found to be in line with the registered VCS PD/<sup>1/</sup>. The power plant was visited by the DOE and their location was recorded through mobile application of Google earth/<sup>16/</sup>.

## 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 onsite assessment. The verification team prepares and/or updates a verification protocol (internal document) that records the conformities and nonconformities, which may be of following types;

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

- a) 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
- b) Modifications to the implementation, operation and monitoring of the registered project activity has not been sufficiently documented by the project participants
- c) Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impact the quantity of emission reductions
- d) Change to the key sustainable development indicators
- e) 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 (CL) is raised if information is insufficient or not clear enough to determine whether the applicable requirements have been met. All CARs and CLs raised by the Earthood 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.

A total of 05 CAR and 00 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 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

This is 2<sup>nd</sup> periodic verification of the project and no FAR envisaged from previous verification. Moreover, no FAR is raised for present verification as well.

### 2.6 Eligibility for Validation Activities

Not applicable.

## 3 VALIDATION FINDINGS

### 3.1 Participation under Other GHG Programs

The project is registered under VCS having VCS reference number-1791 ([https://www.vcsprojectdatabase.org/#/project\\_details/1791](https://www.vcsprojectdatabase.org/#/project_details/1791)).

Assessment team checked the undertaking submitted for the Project and conclude that project neither has any intension to generate any form of GHG related environmental credit for neither GHG emission reductions nor removals claimed under the VCS program<sup>/15/</sup>.

Hence, the project is eligible to participate under the VCS Program.

### 3.2 Methodology Deviations

There is no methodology deviation identified during the current monitoring period.

### 3.3 Project Description Deviations

There is no project description deviation identified during the current monitoring period.

### 3.4 Grouped Project

Not Applicable for present project activity.

## 4 VERIFICATION FINDINGS

### 4.1 Project Implementation Status

The project activity involves installation of 3\*30 MW=90 MW Solar power project in the state of Karnataka which was verified on site/<sup>9/</sup> and through commissioning certificates/<sup>10/</sup>.

The technology employed, converts solar power to electrical energy. Solar power generation technology is environment friendly technology since there are no GHG emissions associated with the electricity generation/<sup>9/</sup>.

The installation and specification of power plant have been checked with commissioning certificates/<sup>10/</sup> and during on-site assessments/<sup>9/</sup>. There was no major breakdown or shut downs during the monitoring period which might affect the applicability of methodology or might cause material errors in emission reductions/<sup>17/</sup>.

Assessment team concludes the following:

- a) The implementation status of project activity was found to be in compliance with registered PD/<sup>1/</sup>.
- b) DOE has conducted the on-site visit to confirm the implementation status of the project/<sup>9/</sup>.
- c) The commissioning date of the project activity was found to be accurately and consistently recorded/<sup>10/</sup>.
- d) The actual operation of project activity was found to be in compliance with the flow diagram provided in registered PD/<sup>1/</sup>.
- e) The emission reductions achieved during the current monitoring period are 140,717tCO<sub>2</sub>e/<sup>3/</sup>.

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.

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/<sup>1/</sup>.

## 4.2 Safeguards

### 4.2.1 No Net Harm

Not applicable

### 4.2.2 Local Stakeholder Consultation

As per the section 2.2 of the MR, the projects have continuous feedback mechanism and kept a grievance register to receive any feedback/grievances/<sup>9/</sup>. from stakeholder. During the onsite visit assessment team checked the grievance register and found that no formal complaint received from the stakeholders. Assessment team also had a discussion with the stakeholders and found overall people are happy with the implementation of the project.

As verified from the copy of grievances registers from each site/<sup>9/</sup> no grievances/feedback received on the operation of the project activity. Assessment team checked the onsite grievance register and found that no formal complaint is launched and people are overall happy with the implementation of the project activity as because it not only improves there lifestyle but also create opportunity for employment. Before the implementation of the project activity the stakeholders were bond labourer and use to work in Agricultural field without any fixed source of income as Agricultural practice are seasonal and depended on Natural condition. After the project is implemented nearby people were employed for both skilled and unskilled work based on the merit and requirement of the organization and hence the project has generated a regular source of employment and income for the stakeholders. Assessment team confirm the positive situation prevailing nearby projects is correct and hence confirm that the stakeholders are happy with the implementation of the project activity.

## 4.3 AFOLU-Specific Safeguards

Not applicable for the present project activity as the project falls under Non- AFOLU category.

## 4.4 Accuracy of GHG Emission Reduction and Removal Calculations

The project monitoring has been carried in accordance with the registered VCS PD/<sup>1/</sup> and the monitoring report/<sup>2/</sup>. The monitoring plan laid in the registered PD/<sup>1/</sup> is being followed at the site/<sup>9/</sup>. 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/<sup>2/</sup>.

The emission reductions are purely based on the net electricity generated and exported from the plant. PP has provided all the sufficient data for current monitoring period/<sup>2/</sup>. 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/<sup>3/</sup> provided by PP. 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. ACM 0002 version 18.1/<sup>7/</sup>. Since project activity is a solar power project, project emission has been considered as zero and no leakage considered as per registered VCS PD/<sup>1/</sup>.

## 4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

The below tables describes how the parameter, that is to be measured according to the 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 fulfilled.

### 1. $EG_{PJ,y}$

| Parameter             | $EG_{PJ,y}$ MWh/y<br>Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh) |                                                                                                                                                              |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Means of verification | Criteria/Requirements                                                                                                      | Assessment/Observation                                                                                                                                       |
|                       | Measuring /Reading /Recording frequency                                                                                    | The parameter is calculated as export –import and monthly recorded as JMR/ <sup>6/</sup> by State electricity board.                                         |
|                       | 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/ <sup>1/</sup> and monitoring methodology/ <sup>7/</sup> . |
|                       | Monitoring equipment                                                                                                       | Dedicated meters for export and import monitoring are located at the sub-station/ <sup>9/</sup> .                                                            |

|  |                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                           |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 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?                           | Accuracy class of the equipment is 0.2s, which is in line to registered PD/ <sup>1/</sup> and consistent with calibration certificate/ <sup>4/</sup> as well. Information was found consistent onsite/ <sup>9/</sup> .                                                                    |
|  | Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?                                                                                                                                                                                             | Accuracy class is valid for entire range.                                                                                                                                                                                                                                                 |
|  | Calibration frequency /interval:                                                                                                                                                                                                                                                                                      | The meters are calibrated by respective State Utility/Authorized agency once in a five year/ <sup>1/</sup> . Same are verified from the calibration certificates provided by the PP/ <sup>4/</sup> . Details of the calibration are provided in FVR Appendix 5 and revised MR Appendix 1. |
|  | 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 with the local/national standards, Pending untill the findings are closed.or as per the manufacturer's specifications? | Yes                                                                                                                                                                                                                                                                                       |
|  | Is the calibration of measuring equipment carried out by an accredited person or                                                                                                                                                                                                                                      | The meters are calibrated by respective State Utility's testing division/Authorized agency once                                                                                                                                                                                           |

|  |                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                          |
|--|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | institution?                                                                                                                              | in a five year <sup>4/</sup> . No delay in Calibration is observed for the present monitoring period.                                                                                                                                                                                                                                                    |
|  | Is(are) calibration(s) valid for the whole reporting period?                                                                              | Yes. The calibration dates are presented in appendix 1 of this report.<br><br>The dates have been checked from the calibration certificates <sup>4/</sup> . No delay in Calibration is observed for the present monitoring period.                                                                                                                       |
|  | Is the calibration carried out for a measuring range comparable with the range for which measurements have been carried out?              | Yes                                                                                                                                                                                                                                                                                                                                                      |
|  | How were the values in the monitoring report verified?                                                                                    | Value of the parameter (148,517.11 MWh) for the monitoring period verified from monthly Joint Meter Reading issued by State Utility <sup>9/</sup> . The value was found to be consistently reported in MR <sup>2/</sup> and ER sheet <sup>3/</sup> .                                                                                                     |
|  | If applicable, has the reported data been cross-checked with other available data?                                                        | The readings were cross checked with the monthly bills raised by PP to respective State Utility <sup>5/</sup> .                                                                                                                                                                                                                                          |
|  | Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place? | Yes, the calibration of the monitoring meters is done by state utility periodically. The primary source of reading is from the main meter however in case of defect in the meter the reading will be considered from the check meter. The situation practices onsite is as per the power purchase agreement and hence acceptable to the assessment team. |

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                         |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
|                   | 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 such issues identified for the present verification. |
| <b>Findings</b>   | No findings raised for monitoring criteria.                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                         |
| <b>Conclusion</b> | <p>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 monitoring results were recorded consistently as per the approved frequency in the monitoring plan<sup>/1/</sup>.</p> <p>The implementation of the project is as per the registered PD<sup>/4/</sup> could be confirmed by the verification team<sup>/9/</sup>.</p> |                                                         |

#### Parameters fixed ex ante:

EF<sub>grid, CM, y</sub>: tCO<sub>2</sub>e/MWh: It is the Emission Factor of NEWNE grid at the time of project registration the mentioned value of 0.9475 tCO<sub>2</sub>e/MWh is consistent with the registered PD<sup>/4/</sup>.

EF<sub>grid, OM, y</sub>: tCO<sub>2</sub>e/MWh: It is the Operating Margin CO<sub>2</sub>e emission factor in year y at the time of project registration the mentioned value of 0.9726 tCO<sub>2</sub>e/MWh is consistent with the registered PD<sup>/4/</sup>.

EF<sub>grid, BM, y</sub>: tCO<sub>2</sub>e/MWh: It is the Build Margin CO<sub>2</sub> emission factor in year y at the time of project registration the mentioned value of 0.8723 tCO<sub>2</sub>e/MWh is consistent with the registered PD<sup>/4/</sup>.

#### Calibration of meters:

During the verification assessment of the project activity, accuracy of all the metering was checked. The installation and working conditions of the meters were checked during the on-site inspection<sup>/9/</sup>. Calibration details of the meter are given in ANNEX 1 of this report.

Further, there was not any significant period of shut-down or break-down period during this monitoring period<sup>/17/</sup>.

#### GHG Calculations

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

The baseline Emissions for a given year is calculated by multiplying the energy baseline (EB) with the grid emission factor.

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

Where:

$BE_y$  = Baseline emissions in year y (tCO<sub>2</sub>/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 CO<sub>2</sub> 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 CO<sub>2</sub>/MWh)

### Grid Emission Factor

The GEF is fixed ex-ante in the PD as given below:

| Parameter | Value  |
|-----------|--------|
| OM        | 0.9726 |
| BM        | 0.8723 |
| CM        | 0.9475 |

Therefore,

$$BE_y = 148517.11 \times 0.9475$$

$$= 140,717 \text{ tCO}_2\text{e (Rundown values)}$$

For the project activity during the current monitoring period, as per section 5.1

$$BE_y = 140,717 \text{ tCO}_2\text{e}$$

$$PE_y = 0 \text{ tCO}_2\text{e (As per the registered PDD)}$$

$$LE_y = 0 \text{ tCO}_2\text{e (As per the registered PDD)}$$

| Year                     | Baseline emissions or removals (tCO <sub>2</sub> e) | Project emissions or removals (tCO <sub>2</sub> e) | Leakage emissions (tCO <sub>2</sub> e) | Net GHG emission reductions or removals (tCO <sub>2</sub> e) |
|--------------------------|-----------------------------------------------------|----------------------------------------------------|----------------------------------------|--------------------------------------------------------------|
| 01-08-2018 to 31-12-2018 | 22935                                               | 0                                                  | 0                                      | 22935                                                        |

|                          |         |   |   |         |
|--------------------------|---------|---|---|---------|
| 01-01-2019 to 01-10-2019 | 117782  | 0 | 0 | 117782  |
| Total                    | 140,717 | 0 | 0 | 140,717 |

## 4.6 Non-Permanence Risk Analysis

Not applicable for the present project activity

# 5 VERIFICATION CONCLUSION

Earthood Services Private Limited (Earthood), contracted by SEI Suryashakti Power Private Limited, has performed the independent 2<sup>nd</sup> verification of the emission reductions for the VCS project activity reference number 1791 “Pavagada Solar Renewable Power Project by Greenko Group” in India for the monitoring period 01-August-2018 to 01-October-2019 reported in the Monitoring Report/2/ Version 03 dated 25/06/2020.

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 ACM 0002 version 18.1 /7/, the monitoring plan contained in the PD Version 02 and VCS guidelines version 4.0, Monitoring Report Version 03 dated 25/06/2020 as per the process described under Section 2 of this report.

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

In our opinion the GHG emissions reductions reported for the project activity for the period 01-August-2018 to 01-October-2019 are fairly stated in the Monitoring Report Version 03 dated 25/06/2020. The GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology ACM 0002 version 18.1 and the VCS standard 4.0.

*Verification period:* 01-August-2018 to 01-October-2019

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

For non-AFOLU projects, use the following table:

| Year | Baseline emissions or | Project emissions or removals | Leakage emissions | Net GHG emission reductions or |
|------|-----------------------|-------------------------------|-------------------|--------------------------------|
|------|-----------------------|-------------------------------|-------------------|--------------------------------|

|                          | removals (tCO <sub>2</sub> e) | (tCO <sub>2</sub> e) | (tCO <sub>2</sub> e) | removals (tCO <sub>2</sub> e) |
|--------------------------|-------------------------------|----------------------|----------------------|-------------------------------|
| 01-08-2018 to 31-12-2018 | 22935                         | 0                    | 0                    | 22935                         |
| 01-01-2019 to 01-10-2019 | 117782                        | 0                    | 0                    | 117782                        |
| Total                    | 140,717                       | 0                    | 0                    | 140,717                       |

Approved by



Kaviraj Singh

Director-Environmental Services

Earthood Services Privated Limited

Date: 25/06/2020

Place: Gurgaon, Haryana

# APPENDIX 1: References

| Sl.No | Title of Document                                                                                                                | Version    | Date                                   |            |
|-------|----------------------------------------------------------------------------------------------------------------------------------|------------|----------------------------------------|------------|
| 1.    | Registered VCS PD                                                                                                                | 02         | 22/11/2018                             |            |
| 2.    | VCS Monitoring Report                                                                                                            | 03         | 25/06/2020                             |            |
| 3.    | ER spread sheet (corresponding to the final monitoring report)                                                                   | 02         | 06/03/2020                             |            |
| 4.    | Calibration Records for the complete monitoring period                                                                           | -          | Please refer to the Annex 1            |            |
| 5.    | Invoice issued by PP for the complete monitoring period                                                                          | -          | -                                      |            |
| 6.    | Joint Meter Readings/ Monthly Credit Report by State Board for complete monitoring period                                        | -          |                                        |            |
| 7.    | ACM 0002 version 18.1                                                                                                            | 18.1       | -                                      |            |
| 8.    | CO2 Baseline Database for the Indian Power Sector published by the Central Electricity Authority (CEA), Ministry of Power, Govt. | version 13 | -                                      |            |
| 9.    | On-site assessment, interviews of plant staff , grievance register                                                               | -          | 04/03/2020                             |            |
| 10.   | Commissioning Certificate issued by the State electricity board                                                                  | -          | Nam e                                  | COD date   |
|       |                                                                                                                                  |            | SEI Surya shakti Power Private Limited | 30/03/2017 |
|       |                                                                                                                                  |            | SEI Bheem Private                      | 30/03/2017 |

|     |                                                                                                                                                                                |              |                                             |                    |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------------------------------------|--------------------|
|     |                                                                                                                                                                                |              | Limit<br>ed                                 |                    |
|     |                                                                                                                                                                                |              | SEI<br>Aditi<br>Power<br>Private<br>Limited | 30/0<br>3/20<br>17 |
| 11. | VCS webpage for the project, VCS ID 1791;<br><a href="https://www.vcsprojectdatabase.org/#/project_details/1791">https://www.vcsprojectdatabase.org/#/project_details/1791</a> | -            | Last accessed<br>on<br>16/03/2020           |                    |
| 12. | VCS Standard                                                                                                                                                                   | Version<br>4 | Last accessed<br>on<br>16/03/2020           |                    |
| 13. | VCS Program Guide                                                                                                                                                              | Version<br>4 | Last accessed<br>on<br>16/03/2020           |                    |
| 14. | Letter of declaration dated from PP regarding not having created<br>or sought any other form of environmental credit for the same<br>period and double counting                | -            | 03/03/2020                                  |                    |
| 15. | Google Earth desktop/Mobile application                                                                                                                                        | -            | Last accessed<br>on<br>16/03/2020           |                    |
| 16. | Break down details of the plant                                                                                                                                                | -            | -                                           |                    |

## APPENDIX 2: Competency Statement

|                           |                                                   |             |            |
|---------------------------|---------------------------------------------------|-------------|------------|
|                           |                                                   |             |            |
| <b>Name</b>               | Anshika Gupta                                     |             |            |
| <b>Country</b>            | India                                             |             |            |
| <b>Education</b>          | M.Sc. (Climate Science & Policy), TERI University |             |            |
| <b>Experience</b>         | 4 Years +                                         |             |            |
| <b>Field</b>              | Climate Change                                    |             |            |
| <b>Approved Roles</b>     |                                                   |             |            |
| <b>Team Leader</b>        | YES                                               |             |            |
| <b>Validator</b>          | YES                                               |             |            |
| <b>Verifier</b>           | YES                                               |             |            |
| <b>Methodology Expert</b> | AMS-I.A., AMS-II.G., ACM0002, AMS-III.A.V.        |             |            |
| <b>Local expert</b>       | YES (India)                                       |             |            |
| <b>Financial Expert</b>   | NO                                                |             |            |
| <b>Technical Reviewer</b> | YES                                               |             |            |
| <b>TA Expert</b>          | Yes (TA 1.2, TA 3.1)                              |             |            |
|                           |                                                   |             |            |
| <b>Reviewed by</b>        | Shreya Garg                                       | <b>Date</b> | 12/03/2019 |
| <b>Approved by</b>        | Kaviraj Singh                                     | <b>Date</b> | 12/03/2019 |
|                           |                                                   |             |            |

|                    |                            |      |            |
|--------------------|----------------------------|------|------------|
| Name               | Sukanta Das                |      |            |
| Country            | India                      |      |            |
| Education          | M.Tech (Energy Technology) |      |            |
| Experience         | 10 Years +                 |      |            |
| Field              | Climate Change             |      |            |
| Approved Roles     |                            |      |            |
| Team Leader        | YES                        |      |            |
| Validator          | YES                        |      |            |
| Verifier           | YES                        |      |            |
| Methodology Expert | NO                         |      |            |
| Local expert       | YES (India)                |      |            |
| Financial Expert   | NO                         |      |            |
| Technical Reviewer | NO                         |      |            |
| TA Expert          | Yes (TA 1.2)               |      |            |
|                    |                            |      |            |
| Reviewed by        | Shreya Garg                | Date | 05/11/2019 |
| Approved by        | Anshika Gupta              | Date | 05/11/2019 |

## APPENDIX 3: Abbreviations

|      |                                                 |
|------|-------------------------------------------------|
| 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                       |
| CO2  | Carbon dioxide                                  |
| EB   | Executive Board                                 |
| ERDA | Electrical Research and Development Association |
| FAR  | Forward Action Request                          |
| GHG  | Green House Gas                                 |

|        |                                           |
|--------|-------------------------------------------|
| ISO    | International Standards Organization      |
| JMR    | Joint Meter Reading                       |
| kW     | Kilowatt                                  |
| kWh    | Kilowatt hour                             |
| MR     | Monitoring Report                         |
| MW     | Megawatt                                  |
| MWh    | Megawatt-hour                             |
| NEWNE  | Northern Eastern Western Northern-Eastern |
| PD     | Project Description                       |
| PP     | Project Proponent                         |
| PPA    | Power Purchase Agreement                  |
| QA/QC  | Quality Assurance and Quality Control     |
| VCS    | Voluntary Carbon Standard                 |
| VCSA   | Voluntary Carbon Standard Association     |
| VCS PD | VCS Project Description                   |
| VCUs   | Voluntary Carbon Units                    |

## APPENDIX 4: Verification Findings

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

| FAR ID                                                 | 01 | Section no. | Date : DD/MM/YYYY        |
|--------------------------------------------------------|----|-------------|--------------------------|
| <b>Description of FAR</b>                              |    |             |                          |
| <i>There is no FAR from the previous verification.</i> |    |             |                          |
| <b>Project participant response</b>                    |    |             | <b>Date : DD/MM/YYYY</b> |
| NA                                                     |    |             |                          |
| <b>Documentation provided by project participant</b>   |    |             |                          |
| NA                                                     |    |             |                          |

|                       |                         |
|-----------------------|-------------------------|
| <b>DOE assessment</b> | <b>Date: DD/MM/YYYY</b> |
| NA                    |                         |

**Table 2** — **CL from this verification**

|                                                      |    |                    |    |               |
|------------------------------------------------------|----|--------------------|----|---------------|
| <b>CL ID</b>                                         | 02 | <b>Section no.</b> | XX | <b>Date :</b> |
| <b>Description of CL</b>                             |    |                    |    |               |
|                                                      |    |                    |    |               |
| <b>Project participant response</b>                  |    |                    |    | <b>Date :</b> |
|                                                      |    |                    |    |               |
| <b>Documentation provided by project participant</b> |    |                    |    |               |
|                                                      |    |                    |    |               |
| <b>DOE assessment</b>                                |    |                    |    | <b>Date:</b>  |
|                                                      |    |                    |    |               |

**Table 3** — **CAR from this verification**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |    |                    |   |                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|--------------------|---|--------------------------|
| <b>CAR ID</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 01 | <b>Section no.</b> | 1 | <b>Date : 04/03/2020</b> |
| <b>Description of CAR</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |    |                    |   |                          |
| <p>The Editorial comments are compiled as observed in section 1 of the MR are as below:</p> <ol style="list-style-type: none"> <li>1. The commissioning certificate for the project is not provided to the assessment team.</li> <li>2. The technical details are provided in the MR; however the supporting documents are missing.</li> <li>3. The timeline of the project activity is missing in section A of the MR. The supporting documents is also not shared with the DOE.</li> <li>4. During the document review it was observed that the details of feeder wise WTGs location is missing in the MR. Corrective action is sought in the respective section of the MR</li> <li>5. The Monitoring period as mentioned in the MR is not correct.</li> </ol> <p>Corrective action is sought for the same.</p> |    |                    |   |                          |
| <b>Project participant response</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |    |                    |   | <b>Date : 06/03/2020</b> |
| <p>The following correction has been corrected over the MR V2.</p> <ul style="list-style-type: none"> <li>• Commissioning certificate is being provided.</li> <li>• Technical details are being submitted to the assessment team.</li> <li>• The timeline is being added to the section 3.1 of the MR V2.</li> <li>• The single line diagram is being added to the Appendix 2 of the MR V2 having the connectivity details.</li> <li>• Monitoring period id being corrected over the MR V2.</li> </ul>                                                                                                                                                                                                                                                                                                            |    |                    |   |                          |
| <b>Documentation provided by project participant</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |    |                    |   |                          |
| Commissioning certificates, technical documents, Single line diagram and the monitoring report.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |    |                    |   |                          |

| DOE assessment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Date: 16/03/2020 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| <p>Following are the observation of the DOE:</p> <p>The commissioning certificate is now submitted to the assessment team. The commissioning date as mentioned in the MR is found correct. CAR is thus closed.</p> <p>The technical detail are checked from the manufacturer manual and also cross checked during onsite visit. Based on documentary evidence and visual inspection it is conform that the project is implemented as per the information provided in the registered PDD. CAR is closed</p> <p>The detail timeline is now added in section B.1 of the MR Version 02. The timeline is in line with the documentary evidence submitted and hence CAR is closed</p> <p>The Single line diagram is now added in Appendix 2 of the revised MR version 02. The same is in line with the onsite practice and hence CAR is closed</p> <p>The Monitoring period is now corrected in both MR version 02 and ER sheet version 02. Hence CAR is closed.</p> |                  |

| CAR ID                                                                                                                                                                                                                                                                                    | 02 | Section no. | 1 | Date : 04/03/2020 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-------------|---|-------------------|
| <b>Description of CAR</b>                                                                                                                                                                                                                                                                 |    |             |   |                   |
| <p>The letter of Undertaking is missing for the following Statement made in the MR version 01:</p> <ol style="list-style-type: none"> <li>1. Participation under other GHG Programs</li> <li>2. Other Forms of Credit</li> </ol>                                                          |    |             |   |                   |
| <b>Project participant response</b>                                                                                                                                                                                                                                                       |    |             |   | Date : 06/03/2020 |
| Double counting Declaration is being submitted                                                                                                                                                                                                                                            |    |             |   |                   |
| <b>Documentation provided by project participant</b>                                                                                                                                                                                                                                      |    |             |   |                   |
| Double counting declaration                                                                                                                                                                                                                                                               |    |             |   |                   |
| <b>DOE assessment</b>                                                                                                                                                                                                                                                                     |    |             |   | Date: 16/03/2020  |
| <p>The Double counting declaration is now submitted to the assessment team. The declaration mentions clearly that project has not participated in any other GHG mechanism for the concerned monitoring period. Hence there is no double counting involved and thus the CAR is closed.</p> |    |             |   |                   |

| CAR ID                    | 03 | Section no. | 4 | Date : 04/03/2020 |
|---------------------------|----|-------------|---|-------------------|
| <b>Description of CAR</b> |    |             |   |                   |

|                                                                                                                                                                           |                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| The metering diagram as presented in Section 4 of the MR is not as per onsite practice. Corrective action is sought for the same.                                         |                          |
| <b>Project participant response</b>                                                                                                                                       | <b>Date : 06/03/2020</b> |
| Metering diagram is being updated as per the onsite practice.                                                                                                             |                          |
| <b>Documentation provided by project participant</b>                                                                                                                      |                          |
| MR V2.                                                                                                                                                                    |                          |
| <b>DOE assessment</b>                                                                                                                                                     | <b>Date: 16/03/2020</b>  |
| The metering diagram is now being introduced in the MR version 02 which is line with the onsite practice and requirement of the applied methodology. Hence CAR is closed. |                          |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |    |                    |   |                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|--------------------|---|--------------------------|
| <b>CAR ID</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 04 | <b>Section no.</b> | 5 | <b>Date : 04/03/2020</b> |
| <b>Description of CAR</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |    |                    |   |                          |
| <p>The emission reduction sheet is not correct due to following observations:</p> <ol style="list-style-type: none"> <li>1. The Net electricity value for SEI Suryashakti corresponding to the month of Oct 2018, Jan –April 2019 is not correct.</li> <li>2. The export value as per the JMR for the month of Aug 2018 for SEI bheem is 1503000 and ER sheet mention the value as 150300.</li> <li>3. The net electricity value for SEI Aditi for the month of June 2019, August 2019 and September 2019 are not correct.</li> <li>4. The monitoring period is not correct and hence the value from Oct 2019 to Jan 2020 is reserved as presented in the ER sheet.</li> <li>5. The actual vs estimated comparison is not correct as the actual ER value is wrongly calculated. Moreover, the estimated pro-rata calculation is also not presented in the ER sheet.</li> <li>6. Assessment team found a discrepancy in the billing cycle for the month of Dec 2018 for all the 3 promoters and hence PP is requested to justify the repercussion on the ER calculation.</li> </ol> <p>Based on the above observation ER values as presented in the MR version 01 is reserved till submission of further documents and appropriate correction in the ER and MR sheet.</p> |    |                    |   |                          |
| <b>Project participant response</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |    |                    |   | <b>Date : 06/03/2020</b> |
| <p>ER calculation sheet has been revised as per the finding. The correction have been described below:</p> <ol style="list-style-type: none"> <li>1. The Net electricity is now consistent with the Form-B.</li> <li>2. The export value for the August month is now corrected in ER V2.</li> <li>3. The net electricity value for SEI Aditi for the mentioned months is being corrected.</li> <li>4. Monitoring period duration is now being corrected over MR V2 and ER V2.</li> <li>5. The comparison between actual and estimation is now being corrected. Also the estimation is now being corrected.</li> </ol> <p>Reading was noted on two different date by the BESCO authority, reading date are now being transparently mentioned over the ER sheet.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |    |                    |   |                          |
| <b>Documentation provided by project participant</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |    |                    |   |                          |
| ER V2, JMR and the invoices of the respective month.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |    |                    |   |                          |

| DOE assessment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Date: 16/03/2020 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| <p>Following are the observation of the DOE:</p> <p>The Net electricity value is now consistent with Form-B. ER sheet is now correct. CAR is closed</p> <p>The export value for August 2018 is now corrected and in line with Form-B. CAR is thus closed</p> <p>The net electricity value for SEI Aditi for the relevant month is now corrected in the ER sheet and in line with Form-B. CAR is thus closed</p> <p>The Monitoring period duration is now corrected. CAR is closed</p> <p>The achieved GHG emission is 15.76 % is lower than the estimated value. This is due to the lower number of sunshine hours. The generation of electricity depends upon many other climatic conditions, and not within the control of the project participant. The lower generation during the current verification period is hence due to certain natural conditions and hence acceptable. CAR is thus closed</p> <p>The discrepancy in billing cycle is now corrected. The revised ER sheet version 02 is now correct. CAR is thus closed.</p> |                  |

| CAR ID                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 05 | Section no. | APPENDIX1 | Date : 04/03/2020 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-------------|-----------|-------------------|
| Description of CAR                                                                                                                                                                                                                                                                                                                                                                                                                                                |    |             |           |                   |
| <p>The Calibration certificates for the complete monitoring period are provided However, for all the 3 promoters 2 calibration dates are provided as supporting however MR mentions only 1 date. Moreover, there is no detail in the MR regarding meter replacement and consequently the calibration of ABS meter for which the calibration is done on 22/08/2019. Corrective action is sought for the same.</p> <p>Corrective action is sought for the same.</p> |    |             |           |                   |
| Project participant response                                                                                                                                                                                                                                                                                                                                                                                                                                      |    |             |           | Date : 06/03/2020 |
| Each calibration date is being added to the MR along with the meter change date.                                                                                                                                                                                                                                                                                                                                                                                  |    |             |           |                   |
| Documentation provided by project participant                                                                                                                                                                                                                                                                                                                                                                                                                     |    |             |           |                   |
| Calibration certificates and the MR V2.                                                                                                                                                                                                                                                                                                                                                                                                                           |    |             |           |                   |
| DOE assessment                                                                                                                                                                                                                                                                                                                                                                                                                                                    |    |             |           | Date: 16/03/2020  |
| The Calibration details are now mentioned correctly. The discrepancy in the MR is now revised. There was no delay in calibration for the concerned monitoring period. CAR is thus closed.                                                                                                                                                                                                                                                                         |    |             |           |                   |

**Table 4 FAR from this verification**

| FAR ID                                        | 09 | Section No. |  | Date : DD/MM/YYYY |
|-----------------------------------------------|----|-------------|--|-------------------|
| Description of FAR                            |    |             |  |                   |
| there is no FAR from this verification.       |    |             |  |                   |
| Project participant response                  |    |             |  | Date : DD/MM/YYYY |
| AA                                            |    |             |  |                   |
| Documentation provided by project participant |    |             |  |                   |
| AA                                            |    |             |  |                   |
| DOE assessment                                |    |             |  | Date: DD/MM/YYYY  |

NA

## ANNEX1:

The Calibration details are as below:

Meter and Calibration details of 30 MW Solar power project by SEI Suryashakti Power Private Limited

| Meter Details                  | Main Meter | Check Meter |
|--------------------------------|------------|-------------|
| Meter Serial No                | 15195521   | 16192438    |
| Meter Make                     | L & T      | L & T       |
| Accuracy Class                 | 0.2s       | 0.2s        |
| Date of Calibration            | 30-03-2017 | 30-03-2017  |
| Due Date of Calibration        | 29-03-2022 | 29-03-2022  |
| Meter Change Date              | 18-05-2017 | 18-05-2017  |
| Meter Serial No                | 17010290   | 17010296    |
| Meter Make                     | L & T      | L & T       |
| Accuracy Class                 | 0.2s       | 0.2s        |
| Date of Subsequent Calibration | 14-08-2017 | 14-08-2017  |
| Date of Subsequent Calibration | 17-04-2018 | 17-04-2018  |
| Date of Subsequent Calibration | 21-11-2018 | 21-11-2018  |
| Date of Subsequent Calibration | 26-02-2019 | 26-02-2019  |
| Date of Subsequent Calibration | 27-05-2019 | 27-05-2019  |
| Date of Subsequent Calibration | 22-08-2019 | 22-08-2019  |
| Due date of Calibration        | 21-08-2024 | 21-08-2024  |

Meter and Calibration details of 30 MW Solar power project by SEI Bheem Private Limited

| Meter Details   | Main Meter | Check Meter |
|-----------------|------------|-------------|
| Meter Serial No | 16192439   | 16192441    |
| Meter Make      | L & T      | L & T       |
| Accuracy Class  | 0.2s       | 0.2s        |

|                                |            |            |
|--------------------------------|------------|------------|
| Date of Calibration            | 30-03-2017 | 30-03-2017 |
| Due date of Calibration        | 29-03-2022 | 29-03-2022 |
| Meter Change Date              | 18-05-2017 | 18-05-2017 |
| Meter Serial No                | 17010285   | 17010251   |
| Meter Make                     | L & T      | L & T      |
| Accuracy Class                 | 0.2s       | 0.2s       |
| Date of Subsequent Calibration | 14-08-2017 | 14-08-2017 |
| Date of Subsequent Calibration | 17-04-2018 | 17-04-2018 |
| Date of Subsequent Calibration | 21-11-2018 | 21-11-2018 |
| Date of Subsequent Calibration | 26-02-2019 | 26-02-2019 |
| Date of Subsequent Calibration | 27-05-2019 | 27-05-2019 |
| Date of Subsequent Calibration | 22-08-2019 | 22-08-2019 |
| Due date of Calibration        | 21-08-2024 | 21-08-2024 |

Meter and Calibration details of 30 MW Solar power project by SEI Aditi Power Private Limited

|                                |            |             |
|--------------------------------|------------|-------------|
| Meter Details                  | Main Meter | Check Meter |
| Meter Serial No                | 17010234   | 17010245    |
| Meter Make                     | L & T      | L & T       |
| Accuracy Class                 | 0.2s       | 0.2s        |
| Date of Calibration            | 30-03-2017 | 30-03-2017  |
| Due date of Calibration        | 29-03-2022 | 29-03-2022  |
| Meter Change Date              | 18-05-2017 | 18-05-2017  |
| Meter Serial No                | 17010234   | 17010245    |
| Meter Make                     | L & T      | L & T       |
| Accuracy Class                 | 0.2s       | 0.2s        |
| Date of Subsequent Calibration | 14-08-2017 | 14-08-2017  |
| Date of Subsequent Calibration | 17-04-2018 | 17-04-2018  |
| Date of Subsequent Calibration | 21-11-2018 | 21-11-2018  |

|                                |            |            |
|--------------------------------|------------|------------|
| Calibration                    |            |            |
| Date of Subsequent Calibration | 26-02-2019 | 26-02-2019 |
| Date of Subsequent Calibration | 27-05-2019 | 27-05-2019 |
| Date of Subsequent Calibration | 22-08-2019 | 22-08-2019 |
| Due date of Calibration        | 21-08-2024 | 21-08-2024 |