SELCO CLEAN ENERGY PRODUCTS GROUPED PROJECT

Carbon Check (India) Private Ltd.

Report ID	CCIPL1708/VCS/VER/SCEGP/20221227
Project title	SELCO CLEAN ENERGY PRODUCTS GROUPED PROJECT
Project ID	VCS 1495
Verification period	01-January-2019 to 31-December-2022
Original date of issue	12-August-2024
Most recent date of issue	16-August-2024
Version	2.0
VCS Standard Version	4.7

Client	Selco Solar Pvt. Ltd.
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Summary:

- **A brief description of the verification and the project**

Verification: Carbon Check (India) Private Ltd. (CCIPL) has been contracted by Selco Solar Pvt. Ltd. (Project Proponent) to carry out the verification of voluntary greenhouse gas emission reductions generated by the grouped project "Selco Clean Energy Products Grouped Project". The verification is based on the desk review of the Monitoring report /01/, registered VCS PD /03/ and the corresponding Validation report /03/, supporting emission reduction calculation spread sheets /02/ and other relevant supporting documents made available to the verification team by the PP accompanied by on-site interviews. This verification involves the period from 01-January-2019 to 31-December-2022.

Project: The project "Selco Clean Energy Products Grouped Project", is a grouped project which employs the methodologies; CDM SSC AMS III. AR 'Substituting fossil fuel-based lighting with LED/CFL lighting systems', version 5.0, CDM SS AMS-I. J 'Solar water heating systems', version 1.0 and CDM SSC AMS I. F 'Renewable electricity generation for captive use and mini-grid', version 3.0/B02/.
The project entails the distribution of clean energy products which includes solar lighting systems (SLS), solar water heating systems (SWHS), and solar Photo Voltaic systems (SPV) to households, communities, institutions and SMEs, throughout various states in India. The grouped project reduces GHG emissions by replacing kerosene/fossil fuel use in the baseline with solar lighting, replacing carbon intensive water heating with solar energy-based water heating and replacing carbon intensive electricity generation with solar electricity.

- **The purpose and scope of verification**

Purpose: The purpose of the verification is to review the monitoring results and verify that monitoring methodology was implemented in accordance with the monitoring plan and monitoring data, used to confirm the reductions in anthropogenic emissions by sources are sufficient, definitive, and presented in a concise and transparent manner. Monitoring plan, monitoring report and project compliance with relevant VCS requirements and host party criteria are particularly verified to confirm that the project has been implemented in accordance with registered design and conservative assumptions, as documented.

- **The monitoring period**
  The monitoring period for this grouped project is from 01-January-2019 to 31-December-2022.

- **The method and criteria used for verification**

  (a) Desk review, involving:

  (i) Review of the data and information presented to verify their completeness;

  (ii) Review of the monitoring plan and monitoring methodology, paying particular attention to the frequency of measurements, including calibration requirements, and the quality assurance and quality control procedures;

  (iii) 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;

  (b) On-site assessment involving but not limited to:

  (i) Assessment of the implementation and operation of the proposed VCS project activity as per the registered VCS PD/03/ and description in MR/01/;

  (ii) Verification of implemented monitoring plans per the VCS PD & MR and applied baseline and monitoring methodology;(iii) Review of information flows for generating, aggregating, and reporting the monitoring parameters;

  (iv) Interview with relevant personnel to confirm that the operational and data collection procedures are implemented in accordance with the monitoring plan in the registered VCS PD /03/;

  (v) A cross-check between information provided in the monitoring report and data from other sources such as inventories, purchase records/05/, or similar data sources (refer Appendix 1.1 of this report);

  (vi) A check of the monitoring equipment including observations of monitoring practices against the requirements of the VCS PD /03/ and the selected methodology/B02/;

  (vii) Review of calculations and assumptions made in determining the GHG data and emission reductions;

  (viii) Identification of quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters.

- **The number of findings raised during verification.**

  A risk-based approach has been followed to perform this verification. During the course of verification, a total of 18 findings were raised, which includes:

  09 Corrective Action Request (CAR); 09 Clarification Requests (CLs); 00 Forward Action Requests (FARs).

  All the raised findings have been successfully resolved by the PP.

- **Any uncertainties associated with the verification.**

The VCS MR /01/, emissions reduction calculations /02/ along with the supporting documents provided are considered to be in line with all the VCS requirements /B01/. The verification team has detected no further uncertainties or quality restriction.

- **Summary of the verification conclusion**
  In CCIPL's opinion, the emission reductions reported for the "SELCO CLEAN ENERGY PRODUCTS GROUPED PROJECT" in the monitoring report are fairly and correctly stated. CCIPL is therefore able to certify that the emission reductions from the "Selco Clean Energy Products Grouped Project" during the period from 01-January-2019 to 31-December-2022, amount to 88,236 tCO_2 equivalent.

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1 INTRODUCTION

1.1 Objective

Selco Solar Pvt. Ltd. as the project proponent has appointed Carbon Check (India) Private Limited (CCIPL) to carry out 4th periodic verification of the grouped project "Selco Clean Energy Products Grouped Project" (VCS 1495) for the period from 01-January-2019 to 31-December-2022. This report summarizes the findings of the verification of the project, performed based on VCS requirements as well as criteria to provide for consistent project operations, monitoring, and reporting.

The objective of the verification is to confirm that:

- The project is implemented as described in the VCS Project Description/03/;
- The monitoring system is implemented and fully functional to generate emission reductions without any double counting /11/, and
- The data reported are accurate, complete, consistent, transparent and free of material error or omission by checking the monitoring records and the emissions reductions calculation.

The verification followed the requirements of VCS Standard (Version 4.7) and VCS Program Guide (version 4.5)/B01/ to ensure the quality and consistency of the verification work and the report.

1.2 Scope and Criteria

The verification of this project is based on the Monitoring Report of this monitoring period /01/, registered VCS PD /03/, Emission reduction calculation spreadsheets /02/, supporting documents made available to the verifier and information collected through performing on-site interviews. Furthermore, publicly available information was considered as far as available and required.

CCIPL has employed a risk-based approach in the verification, focusing on the identification of significant risks and reliability of project monitoring and generation of emission reductions.

The verification is carried out on basis of the following requirements, applicable for this project activity:

- VCS Standard (v4.7) /B01/
- VCS Program Guide (v4.5) /B01/
- CDM SSC AMS III. AR Substituting fossil fuel-based lighting with LED/CFL lighting systems, version 5.0

- CDM SS AMS-I. J Solar water heating systems, version 1.0
- CDM SSC AMS I. F Renewable electricity generation for captive use and mini-grid, version 3.0/B02/.
- Other relevant rules, including the host country legislation

The scope of this verification, by independent checking of objective evidence, is as follows:

- To verify that the project is implemented as described in the registered VCS PD.
- To verify if the implemented monitoring systems and procedures are in compliance with the registered monitoring plan
- To assess the project's compliance with other relevant rules including the host country legislation.
- To confirm that the monitoring system is implemented and fully functional to generate voluntary emission reductions without any double counting.
- To establish that the data reported are accurate, complete, consistent, transparent, and free of material error or omission by checking the monitoring records and the emissions reduction calculation.
- To evaluate the GHG emission reduction data and express a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data is free from material misstatement.
- To verify that reported GHG emission data is sufficiently supported by evidence.
- The verification shall ensure that the reported emission reductions are complete and accurate in order to be certified.

The method and criteria used for verification consisted of the following phases:

1. Completeness check and desk review;
2. On-site interviews with stakeholders;
3. Resolution of outstanding issues and issuance of Final Verification Report and applicable VCS Validation and Verification Deeds of Representation.

CCIPL conducts all its work under strict rules to safeguard impartiality and ensure the independence of the verification team. The verification team does not provide any consulting or recommendations for the client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the monitoring activities.

1.3 Level of Assurance

The verification has been planned and organized to achieve a:

☒ Reasonable level of assurance as per VCS Standard (v4.7)

☐ Limited level of assurance

The threshold for quantitative materiality with respect to the aggregate of errors, omissions, and misrepresentations, relative to the total reported GHG emission reductions and/or removals was limited to five percent, as required VCS Standard version 4.7 /B01-b/.

1.4 Summary Description of the Project

The project "Selco Clean Energy Products Grouped Project" is a project, which employs the methodologies CDM SSC AMS III. AR 'Substituting fossil fuel-based lighting with LED/CFL lighting systems' version 5.0, CDM SS AMS-I. J 'Solar water heating systems' version 1.0 and CDM SSC AMS I. F 'Renewable electricity generation for captive use and mini-grid', version 3.0/B02/. The project involves dissemination of solar lighting systems (SLS), solar water heating systems (SWHS), and solar Photo Voltaic systems (SPV) throughout various states of India.

The project aims to distribute the above-mentioned clean energy products in order to replace the usage of kerosene/fossil fuel used in the baseline kerosene lamps by solar lighting systems, replace the carbon intensive water heating with solar energy based water heating and replace carbon intensive electricity generation with solar electricity. This lowers greenhouse gas emissions linked to combustion of fossil fuels to generate electricity or water heating.

The implementation status of the project activity(s) at the end of the monitoring period has been as follows:

The start date of the project was 01-January-2014, which is the date on which the first clean energy product disseminated under this grouped project began generating GHG emission reductions. PP has maintained distribution database for the SLS, SPV and SWHS /05//09/ collecting requisite distribution data (including beneficiary information) including the dates of distribution of the systems.

Verification team had confirmed that project does not participate in any emission trading program or any other GHG program and has not sought or received any other form of environmental credit. Each product within the project is assigned Selco's name and/or logo and serial ID number to prevent double counting. Emission reductions generated by the project will be claimed solely by PP, who holds the right of use /08/.

Consistency was observed between the final monitoring report (MR) and emission reduction (ER) sheets and the project's full operational status was confirmed through on-site audit. The monitoring plan, as outlined in the MR, was found to be correct, with all parameters monitored using an appropriate system.

The project proponent for the project activity is Selco Solar Pvt. Ltd. and it owns the rights to VERs /08/. The other entities involved in the project are Natural Capital Partners Europe Limited whose role in the project is of Credit Buyer and Climate Secure who are responsible for completion of project related documents.

The envisaged ex-ante estimation of emission reductions for this monitoring period (i.e. 01-January-2019 to 31-December-2022) was 2,01,099 tCO_2e and the total GHG emission reductions achieved from the Project activity instances are 88,236 tCO_2e for this monitoring period from 01- January-2019 to 31-December-2022.

2 VERIFICATION PROCESS

2.1 Method and Criteria

The method and criteria used for verification:

The verification consists of the following three phases:

1. Completeness check and desk review of the MR/01/, monitoring methodology, registered VCS PD /03/, validation report, applicable tools in particular attention to the frequency of measurements, quality of metering equipment including calibration requirements, QA/QC procedures and other relevant documents.
2. On-site interviews (including follow-up interviews with project stakeholders, when deemed necessary). The on-site interviews include the following:
    - An assignment of implementation and operation of project activity with respect to validated VCS PD /03/
    - Review of information flows for generating, aggregating, and reporting the monitoring parameters.
    - Interview with relevant personnel to determine whether the operational and data collection procedures are implemented and in accordance with the monitoring plan of the validated VCS PD /03/,
    - Cross check of information and data provided in the monitoring report with purchase records or similar data sources.
    - Review of assumptions made in calculating the emission reductions (if any).
    - Implementation of QA/QC procedure in-line with the registered VCS PD /03/and methodology requirements.

3. Resolution of outstanding issues and the issuance of the Final Verification Report and as applicable the VCS Verification Deed of Representation.

Milestone description	Time
Date of contract signing with the VVB for verification	24- March-2023
Date of registration of the project activity	07-December-2015
Desk review	23-June-2024 to 15-July-2024
On-site audit	18-July 2024 to 19-July -2024
Date of Issue of Draft Verification Report	19-July-2024
Date of Issue of Final Verification Report	12-August-2024

2.2 Document Review

CCIPL has applied standard auditing techniques to assess the quality of information provided. The verification was performed primarily based on the review of the monitoring report and the supporting documentation. This process included:

- A review of data and information presented by the PP to verify their completeness;
- A review of the monitoring plan and monitoring methodology, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the QA/QC procedures, and;
- An evaluation of data management and the QA/QC system in the context of their influence on the generation and reporting of ERs.

The monitoring report (version 1.0 was initially reviewed and CCIPL requested the PP to present the supporting information and documents /03/-/23/. The documents were reviewed by CCIPL. Through the process of verification, the revised monitoring report and the supporting documents were evaluated to confirm the actions taken by the PP to resolve the CARs and CLs issued by the verification team.

The list of documents referred to during the course of this verification has been provided in Appendix-1.1.

2.3 Interviews

S. No.	Date	Persons interviewed	Location	Subjects covered
1.	18/07/2024 and 19/07/2024	Sudipta Ghosh (SELCO)	SELCO office, Mangalore	• Project implementation and management • Confirmation of technical
2.		Manjeet S P (SELCO)		

3.		Suresh Naik (SELCO)		specifications of the project equipment • Data management and reporting systems • Data verification and cross-checks with primary record database • QA/QC, management systems training • Data archiving • Calculation of emission reductions • List of documents to be verified • Field visits to project locations • Project investments • Carbon rights transfer • Avoidance of double counting
4.		Subramanyan N. (SELCO)		
5.	18/07/2024 and 19/07/2024	Divakar Singh (Climate Secure)	SELCO office, Mangalore	• Project implementation and management • Confirmation of technical specifications of the project equipment • Data management and reporting systems • Data verification and cross-checks with primary record database • QA/QC, management systems training • Data archiving • Calculation of emission reductions • List of documents to be verified • Field visits to project locations • Project investments • Carbon rights transfer Avoidance of double counting
6.		Serin Babu (Climate Secure)		
7.	18/07/2024	Ayyappa K.B SWHS Sr no. 158541	End-user Household (Kundapura)	• Interview of the end user to cross-check PP's monitoring survey • Interview of the end user on the operation of SWH system • Interview of the end user on frequency of service and maintenance offered
8.		Bheema Murthy Gota SWHS Sr no. 2874		
9.		Chandra Poojari SWHS Sr no. 466114		
10.		Nagi Kharvi SWHS Sr no. 235275		
11.		Pavithra D.N. SWHS Sr no. 01979		
12.		Poornima M SWHS Sr no. 159013		
13.		Prasanna Gota		

		SWHS Sr no. 236000		
14.		Sathish Kothwal SWHS Sr no. 233707		
15.	18/07/2024	Digambar Shraff SWHS Sr no. 211867	End-user Household (Udupi)	• Interview of the end user to cross-check PP's monitoring survey • Interview of the end user on the operation of SWH system • Interview of the end user on frequency of service and maintenance offered
16.		Jyothi.T.Poojary SWHS Sr no. 235382		
17.		Narasimha Upadhyaya SWHS Sr no. 211363		
18.		Premalatha Soans SWHS Sr no. 233221		
19.		Ramesh Poojary SWHS Sr no. 465803		
20.		Sadanand Shetty SWHS Sr no. 447881		
21.		Sharath Kumar SWHS Sr no. 211946		
22.		Suresh Nayak SWHS Sr no. 449852		
23.		Umesh Nayak.K. SWHS Sr no. 160263		
24.		Vasumathi SWHS Sr no. 234425		

2.4 Site Visits

CCIPL has conducted on-site inspection on 18-July-2024 and 19-July-2024 to confirm all physical features of the project activity proposed in the VCS PD /03/ are in place and that the project proponent has operated and correctly monitored all parameters of the project activity as per the PD during this monitoring period.

The on-site assessment as a part of verification activity involved:

1) An assessment of the implementation and operation of the project activity

2) A review of information flows for generating, aggregating, and reporting of the monitoring parameters

3) Interviews with relevant personnel to confirm that the operational and data collection procedures are implemented in accordance with the MP.

4) A cross-check between information provided in MR /01/ and data from other sources.

5) Observations of monitoring practices against the requirements of the applied monitoring methodology

6) A review of calculations and assumptions made in determining the GHG data and ERs, and

7) An identification of QA/QC procedures in place to prevent, or identify and correct, any errors or omissions in the reported monitoring parameters.

In order to monitor the operational factor of Solar Water Heater Systems (SWHS), PP has conducted a monitoring survey using random sampling technique over the sampling frame, and detailed calculations are provided below as per CDM guidelines "Sampling and surveys for CDM project activities and programmes of activities" v 9.0 and option (b). The verification team has chosen acceptance sampling approach to verify PP's monitoring survey results in accordance with paragraph 28 of the sampling standard /B04/.

In compliance with paragraph 39 of the sampling standard, version 09 /B04/, acceptance sampling was carried out by the verification team. A sample size of 18 SWHS was chosen. The sample size of 18 was determined, based on an AQL of 1.0% and UQL of 20%, producer risk 10% and consumer risk 10%. Acceptance number thus determined for the sample is 1. The information provided in the sampling survey data /12/, has been cross checked during the on-site interviews conducted and it has been confirmed that the sampling survey data has no discrepant records. Thus, PP's set of records has been accepted in line with § 33 of the sampling standard, version 09.0 /B04/. Detailed assessment of the PP's sampling approach and the verification team's sampling has been included in section 4.3 of this report.

The verification team carried out on-site interviews with representatives of PP in order to assess the information included in the project documentation and to gain additional information regarding the compliance of the project with the relevant criteria applicable for the VCS and results of SDGs claimed.

2.5 Resolution of Findings

CCIPL, during this verification, identified issues related to the monitoring, implementation or operation of the VCS project that influenced the reporting of emission reductions. CCIPL has identified, discussed these issues within the Verification report in Appendix 4.

- Clarification requests (CLs): Project reporting lacks transparency and further information is needed to determine if a material discrepancy is present.

- Corrective action requests (CARs): The VVB has identified a material discrepancy or non-conformance that the project proponent must address.

The verification team identified 09 CARs and 09 CLs. All CAR and CLs raised by CCIPL during this verification have been successfully resolved by the PP. If this was not completed, the ERs cannot be certified and recommended for issuance to the VCS Registry.

2.5.1 Forward Action Requests

Forward Action Request (FAR) is to be raised when the monitoring and reporting require attention and/or adjustment for the next verification period. FARs does not relate to VCS requirements for issuance of ERs achieved during subject monitoring.

CCIPL has not raised any FAR during this verification.

2.6 Eligibility for Validation Activities

The project activity falls under sectoral scope 01 and the CCIPL is accredited for validation /verification of project activities under this scope.

3 VALIDATION FINDINGS

3.1 Methodology Deviations

Previously validated methodology deviations for this grouped project are as follows:

S. no.	Description of deviation in MR	Assessment
1.	AMS-I. J SWH systems	The verification team reviewed the VCS PD/03/, MR/01/ and further based on its sectoral expertise confirms that the monitoring of small residential and non-residential SWH systems using the methods outlined in the applied and monitoring methodology AMS-I.J (version 01) /B02-b/ will not be financially viable for both the PP and the end users. This was further confirmed based on the conducting interviews with the representatives of PP.

	Included in the registered PDD. This grouped project distributes mostly household SWH systems, but some non-residential systems are projected to be included. However, the non-residential systems are identical technical specifications. They are also similar in size, in accordance with Table 1, Annex 1 of the methodology (small/very small). For such small systems, the additional monitoring requirements for non-residential systems would be too costly, and therefore a deviation is proposed for the monitoring plan for these systems. For these systems, we propose to apply the same stipulated energy saving method, using the conservative methodology default value of 450 or 300 kWh/year per m_2 of collector area, depending on the location. In its Annex 1, the methodology classifies systems "small" and "residential" with a typical collector array size of 100 m_2, possibly even bigger. Therefore, we propose to limit this deviation to systems up to 100 m_2 only. It is not foreseen that any commercial system would exceed this size, but if they were installed only 100 m_2 will be claimed to be conservative.	Based on the review of the sales database /05/, ER sheet /02/ and the on-site assessment, it was confirmed that all collector areas are less than 100 m^2 and for the calculation of emission reductions, the cap on the array size of an SWH system equal to 100m^2 is deemed to be appropriate to the verification team in accordance with Table 1 of Annex 1 of the applied methodology according to which small collector areas must be within 100 m^2 area. Thus, only small (residential/ non-residential) SWH systems considerations will be made (regardless of the actual system size and type of end use location) under this grouped project. The verification team confirms that the above deviation would lead to materially less baseline emissions and thus does not lead to overestimation of emission reductions . Therefore, the approach applied by the PP is conservative. Thus, the deviation is deemed acceptable during the current monitoring period.
2.	AMS-I. F PV systems	The verification team reviewed the VCS PD/03/, MR/01/ and further based on its sectoral expertise confirms that the installation of electricity meters and their regular calibration and maintenance would be financially unviable for both PP and end user. This was further confirmed based on the on-site interviews with representatives of PP and the end users. The verification team confirms that the above deviation does not lead to overestimation of

<table>
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<td></td>
<td>Included in the registered PDD This grouped project distributes small PV systems that generate electricity for the users. In many areas these systems are not currently accepted to be grid connected, by the grid companies. For most small installations, therefore, no electricity meter is available. For some larger-scale mini-grids, an energy meter is likely necessary for efficient operation of the system.

It is proposed that where available, the data from the energy meters of the systems are used, even if the meters are not grid-connected; where meters are not available, or the meters are not calibrated, a conservative estimate of daily electricity generation is used.

Expected daily generation in selected States in India:
<table>
<tr><th>State</th><th>Capacity Utilisation Factor (%)</th><th>Output for 1 kW_p (kWh/day)</th></tr>
<tr><td>Andhra Pradesh</td><td>20</td><td>4.8</td></tr>
<tr><td>Gujarat</td><td>18</td><td>4.32</td></tr>
<tr><td>Karnataka</td><td>19</td><td>4.56</td></tr>
<tr><td>Madhya Pradesh</td><td>19</td><td>4.56</td></tr>
<tr><td>Maharashtra</td><td>19</td><td>4.56</td></tr>
<tr><td>Punjab</td><td>19</td><td>4.56</td></tr>
<tr><td>Rajasthan</td><td>20</td><td>4.8</td></tr>
<tr><td>Tamil Nadu</td><td>19</td><td>4.56</td></tr>
<tr><td>Uttarakhand</td><td>19</td><td>4.56</td></tr>
</table>
</td>
<td>emission reductions and moreover the approach applied by the PP is conservative. This is based on the fact that PP is using a conservative value of the daily electricity generation, which is 4 kWh per kWp.

This value of ‘daily generation from each solar PV’ has been rounded off and is derived from the values listed in the table titled ‘Expected daily generation in selected states in India’ which has been collected from an external independent source and listed in the VCS PD/03/ and VCS MR/01/.

Thus, the deviation is deemed acceptable during the current monitoring period.</td>
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	It is proposed that for systems without an energy meter, a conservative daily electricity generation of 4 kWh per kWp is used. This value is below the expected daily generation in the States initially targeted by this grouped project, in South India, as given in the Table above.	

3.2 Project Description Deviations

There are no Project Description deviations identified during this monitoring period.

3.3 New Project Activity Instances in Grouped Projects

The grouped project entails the dissemination of clean energy products. Total 24,115 SLS, 8,438 SPV and 14,252 SWHS were disseminated till the end of 4th monitoring period. (01-January-2019 to 31-December-2022). The total estimated GHG emission reductions achieved from Project activity instances are 89,815 tCO2e for this monitoring period. Therefore, as described in the registered VCS PD/03/, for each new instance (installed ICS) the eligibility criteria below confirm the new project activity instances in the assessment below:

The number of new project activity instances added to the project in this verification period are 4,259 SLS, 3,915 SPV and 3,565 SWHS. Under this grouped project PP has considered each clean energy product as a project activity instance which is deemed acceptable as per the VCS Program Definitions and VCS Standard/B01/. The eligibility criteria of the Project Activity Instance were established at the group project validation in the VCS PD/03/.

The verification team assessed the appropriateness of new project activity instances (added to the grouped project) against the requirements of the following key elements defined in section 3.2.11 of the Validation and Verification Manual (version 3.2):

Table 1:- Eligibility Criteria for new project activity instances as per § 3.2.11 of the VCS_Validation_Verification_Manual_v3.2

Key Element	Requirements /B01-f/	DOE Assessment
Geographic Areas	VVBs must ensure that the project description clearly identifies the geographic areas within which new instances may be added. Geographic areas must be defined using geodetic	The verification team reviewed the sample electronic sales records /09/ for new project activity instances, sales records spreadsheets /02/ /05/ and by further conducting interviews with representatives of PP to confirm that all new project activity instances are located within the geographical area identified in the

	polygons and provided in a KML file. Such geographic areas need not be contiguous and may be large or small, noting the grouped project requirements for additionality and baseline assessments of the geographic area.	registered VCS PD. All new project activity instances are located within the host country of India. This is deemed appropriate to the verification team. Thus, the requirements of this key element have been met by all the new project activity instances added to the grouped project.
Identification of baseline scenario and demonstration of additionality:	The assessment of baseline scenario and additionality is based upon the initial instances included within each geographic area. VVBs must ensure that, for each project activity, a single baseline scenario exists for each geographic area. VVBs must also ensure for each project activity that additionality is demonstrated across the entirety of each geographic area. Failing this, VVBs must require that the geographic areas are redefined such that the requirements are met. As with projects with multiple instances, project activity instances within a grouped project should be part of the same investment decision if they are to be included in a single project.	The verification team reviewed the sample electronic sales records /09/ for new project activity instances, sales records spreadsheets /05/ , conducted on site interviews with representatives of PP and further based on its sectoral expertise confirms that a single baseline scenario for each project technology and geographic area, as identified in section 2.3 and 2.4 of the VCS PD, is applicable to the corresponding new project activity instances under the specific technology. In addition, the verification team further confirms that each new project activity instance included within the grouped project follows the additionality requirements as laid out in §11(c) of the small-scale additionality tool and section 2.5 of the VCS PD for the entire geographic area. Thus, it has been demonstrated that for each project activity instance included in grouped project • a single baseline scenario exists (corresponding to the project technology) • the requirements of additionality are being complied with for the entirety of geographic area (India) within which they are installed. This is deemed appropriate to the verification team. Thus, the requirements of this key element has been met all the new project activity instances added to the grouped project.
Eligibility criteria	VVBs must ensure that an	The verification team reviewed the project

	appropriate set of eligibility criteria are established for each combination of project activity and geographic area. The criteria are used to validate new project activity instances, essentially serving as a checklist to determine whether the instances share the same attributes as the initial set of validated project activities instances. For example, eligibility criteria for grouped projects implementing CFLs may state that new instances must be installed in grid-connected households and the CFLs must be at least 30 percent more expensive compared to conventional incandescent bulbs. In general, VVBs must ensure that the eligibility criteria are developed sufficiently that such determinations could be made when validating new instances. Eligibility criteria must also conform to any restrictions set out in the methodologies applied.	database, technical specifications of the project devices, conducted on site interviews with representatives of PP and further based on its sectoral expertise confirms that the eligibility criteria established at project validation for new project activity instance is sufficiently met during the current periodic verification. Based on the assessment provided, the verification team concludes that each new project activity instance meets the appropriate set of eligibility criteria (as defined in VCS PD/03/) and thus shares the same attributes as the initial set of validated project activity instances. Thus, the verification team deems them to be appropriate for inclusion in the grouped project. This is deemed appropriate to the verification team. Thus, the requirements of this key element has been met all the new project activity instances added to the grouped project.
Monitoring and GHG information system	VVBs must ensure that the project has an appropriate monitoring plan that includes a sampling plan to	The verification team reviewed the VCS MR/01/ and further conducted interviews with representatives of PP to confirm that the monitoring plan and procedures mentioned

	collect data from all project activity instances and information systems, allowing for centralized data collection. VVBs must ensure the sampling plan is able to generate statistically significant results.	therein (which includes the sampling plan) is in conformance to the requirements laid out in the applied UNFCCC methodologies /B02/ and the VCS PD /03/, Moreover, according to the monitoring plan the PP is responsible for collecting and storing data in electronic form at a centralized location (Tally software). The verification team further confirms that new project activity instances will conform to the monitoring plan requirements and procedures stated therein. However, as per specific requirements of the applied methodologies AMS-I.J /B02-b/ and AMS-III.AR /B02-c/ actual sampling of operation of project equipment under methodologies AMS-I.J and AMS- III.AR has taken place, while as per the specific deviation in the VCS PD monitoring of electricity generation has taken place for project systems under methodology AMS-I.F /B02-a/, during the current monitoring period. Based on the review of the applied methodologies and VCS PD this is deemed to be acceptable to the verification team. Refer to section 4.1 below for detailed discussion on monitoring activities. This is deemed appropriate to the verification team. Thus, the requirements of this key element has been met all the new project activity instances added to the grouped project.
Methodology	Grouped projects can apply methodologies other than those designed specifically for grouped projects. When reviewing the methodology and the project's application of it, VVBs must be mindful of any capacity limits applicable to the methodology. VVBs need	The verification team reviewed the MR /01/ sample electronic sales records for new project activity instances, sales records spreadsheets and further conducted interviews with representatives of PP to confirm that all new project activity instances comply with the requirements of their respective applied methodologies. Furthermore, it is confirmed that no methodologies other than those designed specifically for grouped projects have

	only ensure that project activity instances and clusters adhere to such capacity limits; the grouped project as a whole may exceed the capacity limit.	been applied. Moreover, as assessed in Appendix-4, all new project activity instances comply with the respective capacity limits as per the applied methodologies. This is deemed appropriate to the verification team. Thus, the requirements of this key element has been met all the new project activity instances added to the grouped project.

Based on the above assessment the verification team confirms that inclusion of new project activity instances in the grouped project is valid.

3.4 Baseline Reassessment

Did the project undergo baseline reassessment during the monitoring period?

☐ Yes ☒ No

4 VERIFICATION FINDINGS

4.1 Project Details

The project, "Selco Clean Energy Products Grouped Project" is registered under VERRA as a VCS project (VCS Project ID 1495) applying the methodologies CDM SSC AMS III. 'AR Substituting fossil fuel-based lighting with LED/CFL lighting systems' version 5.0, CDM SS AMS-I. J 'Solar water heating systems' version 1.0 and CDM SSC AMS I. F 'Renewable electricity generation for captive use and mini-grid', version 3.0/B02/.

The project involves dissemination of clean energy products which include solar lighting systems (SLS), solar water heating systems (SWHS), and solar Photo Voltaic systems (SPV) in India. These systems utilize solar energy to generate either thermal or electrical energy as needed. This grouped project therefore seeks to substitute fossil fuel-based energy consumption required to meet equivalent energy demands, thereby promoting a sustainable future for energy.

AMS III. AR. Version 05.0: In the baseline scenario, lighting is provided through kerosene lamps which contribute to GHG emissions. The project activity involves replacing these kerosene/fossil fuel lamps by solar lighting systems (all products under the project are battery charged LED or CFL lighting systems), thereby leading to emission reductions.

AMS I. J. version 01.0: In the baseline scenario hot water is being provided through electric boilers which lead to GHG emissions. Therefore, the project activity leads to emissions reductions by replacing carbon intensive water boilers by solar energy-based water heating systems.

AMS I. F. version 03.0: In the baseline scenario, electricity for captive use is generated by the national or the regional grid, fossil fuel fired captive power plant or a carbon intensive mini grid, which contribute to GHG emissions. The project activity involves electricity generation using solar PV, hence leading to emission reductions.

The project has disseminated a total of 24,115 SLS, 8,438 SPV and 14,252 SWH systems from 2014- 2022. The start date for the project is 01-January 2014 which is the date on which the first clean energy product disseminated under this grouped project began generating GHG emission reductions. The PP has maintained distribution databases /05/ for the SLS, SPV and SWH systems collecting requisite distribution data (including beneficiary information) including the system start dates. The total GHG emission reductions achieved from the Project activity instances are 88,236 C02e for this monitoring period from 01-Januray-2019 to 31-December-2022.

The verification team confirms that the monitoring plan is in accordance with the applied methodology. All data are collected and archived in accordance with the applied methodologies and included in the monitoring plan. This was confirmed based on the on-site interviews with representatives of PP and upon further review of the relevant records. It is confirmed that ex-ante parameters mentioned in section 4.1 of the MR /01/ are in line with the parameters mentioned in section 4.1 of the VCS PD. All the ex-post parameters have been monitored as per the monitoring plan and presented in section 4.2 of the MR /01/.

During the verification, all relevant monitoring parameters of the registered monitoring plan have been verified regarding the appropriateness of the verification method; the correctness of the values applied for ER calculation, the accuracy and applied QA/QC measures. All monitoring parameters have been measured / determined without material misstatements and are in line with all applicable standards and relevant requirements. It is confirmed that the monitoring mechanism is effective and reliable.

The verification team was able to verify that authorities and responsibilities for monitoring and reporting of data related to the emission reductions were clearly defined for the monitoring period from 01-January-2019 to 31-December-2022. This is documented in a written form and is followed as described in the MR. It was observed that the data is consistent between the final MR and ER sheets. The status of the project activity was verified through onsite audit and confirmed that the project is fully operational. The monitoring plan described in section 4.3 of the MR /01/ was confirmed to be correct. All the parameters of the monitoring plan are monitored using appropriate system, the details of which, as mentioned in the section 4.3 of the MR /01/, have been confirmed through the onsite visit and the technical specifications /06/ submitted by the PP.

The verification team has interviewed the respective personnel involved in the monitoring of the parameters that are used to determine the emission reductions of the project. It is confirmed based on the interviews and review of roles and responsibilities as per organizational structure, that the team is competent enough to monitor the parameters as described in the monitoring plan. The verification team concludes that management and operational system of the project is implemented and operated well. The organizational structure, responsibilities and competencies of the personnel that carried out the monitoring activities are found to be satisfactory to the verification team including the methods used for measuring, recording, storing, aggregating, collating, and reporting the data on monitored parameters. The procedures used for handling including frequency of measurement and QA/QC procedures are also verified by verification team and found that the required confidence level or precision has been met. Thus, it ensures the quality of data which is required in calculating the emission reductions.

The verification team confirms that there is no change of physical features from the registered VCS PD, which may impact the emission reductions of the project activity. This has been confirmed based on the review of sales records /05/, conducting interviews with representatives of PP as well as by carrying out on-site interviews with end users. Thus, the verification team concludes that all the physical features of the VCS project in the registered VCS PD/03/ are in place.

<table>
<tr><th>Item</th><th colspan="5">Evidence gathering activities, evidence checked, and assessment conclusion:</th></tr>
<tr><td rowspan="2">Audit history</td><td>Audit type</td><td>Period</td><td>Program</td><td>Validation/verification body name</td><td>Number of years</td></tr>
<tr><td>Validation</td><td>04-December-2015</td><td>VCS</td><td>Carbon Check India Private Limited</td><td>--</td></tr>
</table>

	Verification	(01-January-2014 to 31-December-2015)	VCS	Carbon Check India Private Limited	Two years
	Verification	01-January-2016 to 3	VCS	EPIC Sustainaility Services Private Limited	One year

		1-December-2016			
	Verification	01-January-2017 to 31-December-2018	VCS	Carbon Check India Private Limited	Two years
	Verification	01-J	VCS	Carbon Check India Private Limited	Four years

		January-2019 to 31-December-2022				
Double counting and participation under other GHG programs	• The monitoring system is implemented and fully functional to generate emission reductions without any double counting. The project is not receiving or seeking credit for reductions and removals from a project activity under another GHG program. PP informed the manufacturers of the project systems and the implementation partner that the Verified Carbon Units (VCUs) may be issued for the greenhouse gas emission reductions and removals under this project. PP will further apprise that the ownership of these credits lies exclusively with Selco Solar Pvt. Ltd. to avoid any potential risk of double claiming. The verification team by means of document review and onsite visit interviews confirms that the method for distribution of the project systems includes the method to avoid double counting of emission reductions such as serial ID numbers of product and end-user details (name, phone number, address date of distribution etc.) /05/ • PP has provided sample end user agreement which has been reviewed by the verification team and found to be acceptable and confirms that the systems included in the project shall					

	not be used for claiming credits under other GHG programs to avoid any double counting. Furthermore, based on a review of the project database /05/ as well as web-research of carbon registries (CDM, GS, VCS), provided agreements with the project owner and distributors/producers and serial ID number of the products /11/ on the systems, verification team confirms that there are no other VCS projects in the region where the project intervenes. This has been confirmed by document review, web research and during on site visit where no other clean energy product system registered under any other GHG program were observed.
No double claiming with emissions trading programs or binding emission limits	The project emission reductions and removals are not included in any emissions trading program or binding emission limit. The same is verified by verification team as explained above.
No double claiming with other forms of environmental credit	The project activity has not sought, received, or is not planning to receive credit from another GHG-related environmental credit system as explained above. /B03/
Supply chain (scope 3) emissions double claiming	The project activities does not affect the emissions footprint of any product(s) (goods or services) that are part of a supply chain. This is because since the project's GHG emissions reductions or removals do not occur within a supply chain but at the project beneficiary location. Also, the project beneficiary(ies) has assigned unconditional rights to the ownership of credits to the project proponent precluding anyone other than Selco Solar Pvt Ltd to claim concerned credits /11/.
Sustainable development contributions	The project has implemented the activities that result in the SD contributions described in section 1.12 of the monitoring report.
Additional information relevant to the project	No commercially sensitive information that has been excluded from the public versions of project documents conforms with the VCS Program.

4.2 Safeguards and Stakeholder Engagement

4.2.1 Stakeholder Identification

The Stakeholder makeup has not changed since registration or previous issuance.

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Stakeholder identification	The verification team through review of MR/01/, VCS/PD and interviews with representatives of PP confirms that sufficient mechanism is in place to identify stakeholder and PP has identified relevant stakeholders as described in the MR.
Legal or customary tenure/access rights	The verification team confirms that grouped project activity involves distribution of clean energy products (SLS, SPV and SWHS) to beneficiaries. Therefore, there are no legal or customary tenure/access rights to territories and resources, including collective and conflicting rights, held by stakeholders, indigenous people (IPs), local communities (LCs), or customary rights holders which can be conflicted due to the distribution of the clean energy products. Hence, not applicable.
Stakeholder diversity and changes over time	Verification team confirms that implementation of project is as described in the VCS PD. The stakeholders identified have not changed over time and reassessment of stakeholder diversity is not required during the current monitoring period. The relevant stakeholders have been sufficiently described in the MR.
Expected changes in well-being	The grouped project activity leads to the economic and social well-being of stakeholders by creating local employment opportunities in operational, management, manufacturing, distribution, and logistics roles. This has been confirmed by the verification team through sample employment records and interviews during on site audit. Moreover, the project also encourages participation of youth in formal and non-formal education through the LFE (Light for Education) and DE (Digital Education) programs, which improves access to learning resources and encourages student attendance. Additionally, the project boosts the renewable energy share in total energy consumption by distributing solar lighting, solar water heating, and solar PV systems to households, communities, and SMEs in rural and urban areas.
Location of stakeholders	The verification team confirms that stakeholders impacted by the grouped project include the beneficiaries of the clean energy products (SLS, SPV and SWHS) and those who are getting employment due to the project activity. Hence, the impact of the project devices is deemed localized and hence areas outside the project area are not predicted to be impacted by the project.
Location of resources	The verification team confirms that grouped project activity involves distribution of clean energy products to individual households, institutions, communities, SMEs etc and hence does not interfere with rights to lands, territories and/ or resources.

4.2.2 Stakeholder Consultation and Ongoing Communication

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Ongoing consultation	The verification team confirms that PP maintains a comprehensive 'ongoing communication' process via the Grievance mechanism which includes customer care contact details, and web-based grievances raising process. This has been confirmed from the grievance register /16/ and through interviews with PP's representatives during the on-site audit. All grievances received are recorded in PP's digital grievance register, addressed via appropriate actions to address and resolve each concern based on their merit
Date(s) of stakeholder consultation	--
Communication of monitored results	Communication of the monitored results to stakeholders is done by publishing them on the PP's website. This has been confirmed by the verification team from the sample screenshots of the website wherein the results for 2019 to 2022 have been provided. /22/
Consultation records	The verification team confirms that all grievances received are recorded in the digital grievance register and appropriate actions are taken to address the same such as addressing the grievances within three business days and based on merit. This has been confirmed from the grievance register /16/ and through interviews with the PP's representatives during the on-site audit.
Stakeholder input	The verification team confirms that no changes to the project design have been made owing to the positive reception of the project as confirmed during the on-site audit.

4.2.3 Free, Prior, and Informed Consent

This is not applicable as the project involves distribution of SLS, SPV and SWH systems.

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Consent	NA

Outcome of FPIC discussion	NA

4.2.4 Grievance Redress Procedure

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Grievance received and steps taken to resolve the grievance including the outcomes of the resolution	The grievances received during the current MP along with their resolution are specified in section 2.1.4 of the MR. This has been cross-checked by the verification team through on site interviews and grievance records.
Grievance redress procedure	VVB has confirmed through interviews with management staff of PP and end-users that the end users/stakeholders can put forward their grievances regarding the project on the company's customer care phone number. Additionally, VVB has reviewed PP's digital grievance register to cross-check the grievances received and their resolution./16/.

4.2.5 Public Comments

Comments received	Actions taken by the project proponent	Evidence gathering activities, evidence checked, and assessment conclusion
No public comments received during the monitoring period.	-	*XX*

4.2.6 Risks to Local Stakeholders and the Environment

4.2.6.1 Management Experience

The verification team was able to verify that authorities and responsibilities for monitoring and reporting of data related to the emission reductions were clearly defined for the monitoring period from 01-January-2019 to 31-December-2022. This is documented in a written form and is followed as described in the MR. The verification team has interviewed the respective personnel involved in the monitoring of the parameters that are used to determine the emission reductions of the project. It is confirmed based on the interviews and review of roles and responsibilities as per organizational structure, that the team is competent enough to monitor the parameters as described in the monitoring plan. The verification team concludes that management and operational system of the project is implemented and operated well. The organizational structure, responsibilities and competencies of the personnel that carried out the monitoring activities are found to be satisfactory to the verification team including the methods used for measuring, recording, storing, aggregating, collating, and reporting the data on monitored parameters.

4.2.6.2 Risk Assessment

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Natural and human induced risks to stakeholders' wellbeing	Based on review of the MR, interviews with representatives of PP and the end users, the verification team confirms that no risks were identified related to natural and human induced risks to stakeholders' wellbeing.
Risks to stakeholder participation	Based on review of the MR, interviews with representatives of PP and the end users, the verification team confirms that no risks were identified related to stakeholders' participation.
Working conditions	Based on review of the MR, interviews with representatives of PP and employees of the PP , the verification team confirms that no risks were identified related to working conditions.
Safety of women and girls	Based on review of the MR, interviews with representatives of PP and employees of the PP , the verification team confirms that no risks were identified related to safety of women and girls.
Safety of minority and marginalized groups, including children	Based on review of the MR, interviews with representatives of PP and employees of the PP , the verification team confirms that no risks were identified related to safety of minority and marginalized groups, including children.

Pollutants (air, noise, discharges to water, generation and release of hazardous materials and chemical pesticides and fertilizers	Based on review of the MR, technical specifications of project devices and interviews with representatives of PP ,Verification team confirms that no risks identified in the project related to pollutants (air, noise, discharges to water, generation of waste, release of hazardous materials) generated due to operation of project.

4.2.7 Respect for Human Rights and Equity

4.2.7.1 Labor and Work

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Discrimination	Based on on-site interviews with representatives of PP, VVB confirms that no risks are identified that might lead to discrimination against employees of PP.
Sexual harassment	Based on on-site interviews with representatives of PP, VVB confirms that no risks are identified that might lead to instances of sexual harassment against employees of PP.
Gender equity in labor and work	Based on on-site interviews with representatives of PP, VVB confirms that sufficient measures are undertaken to ensure gender equity in labor and work.
Forced labor	Based on on-site interviews with representatives of PP, VVB confirms that no risks are identified that might lead to forced labor against employees of PP.
Child labor	Based on on-site interviews with representatives of PP, VVB confirms that sufficient measures are undertaken to ensure prevention of child labor.
Human trafficking	Based on on-site interviews with representatives of PP, VVB confirms that sufficient measures are undertaken to ensure prevention of human trafficking.

4.2.7.2 Human Rights

Risks identified	Evidence gathering activities, evidence checked, and assessment conclusion

Human rights	VVB confirms that the project activity involves distribution of clean energy products to households, communities, institutions, SMEs etc. and in the context of this project, there are no legal or customary tenure/access rights to territories and resources, including collective and conflicting rights held by stakeholders, local communities (LCs), or customary rights holders. Hence, no risks are identified.

4.2.7.3 Indigenous Peoples and Cultural Heritage

Risks identified	Evidence gathering activities, evidence checked, and assessment conclusion
No risk identified	The clean energy products are installed in the households, communities, institutions, SMEs etc. These do not interfere with any sites, structures, or objects with historical, cultural, artistic, traditional, or religious values or intangible forms of culture. These also do not interfere with the rights of IPs, LCs and customary rights holders and their cultural heritage. This has been confirmed by the VVB, based on on-site interviews with representatives of PP. Hence, no risks were identified.

4.2.7.4 Property Rights

Risks identified	Evidence gathering activities, evidence checked, and assessment conclusion
No risks identified	The project activity involves distribution of clean energy products to households, communities, institutions, SMEs etc. and it does not require acquisition of property. Based on interviews with end-users, VVB has confirmed that the project is a completely voluntary activity, and participants are free to choose whether they take part or not. The project does not lead to any kind of disputes over territories or resources. It also does not impact property rights. Hence, no risks were identified.

4.2.7.5 Benefit Sharing

Item	Evidence gathering activities, evidence checked, and assessment conclusion

Summary of the benefit sharing plan	The grouped project activity involves distribution of clean energy products to households, communities, institutions, SMEs etc and therefore does not impact property rights, usage, or resources. Hence not applicable.
Benefit sharing during the monitoring period	NA as per the reasons stated above.

4.2.8 Ecosystem Health

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Impacts on biodiversity and ecosystems	The project activity involves distribution of clean energy products to households, communities, institutions, SMEs etc. Moreover, installations of the SPV, SLS or SWHS is done on rooftops. Hence, it does not have negative impacts on biodiversity and ecosystems. It is also not having any risks to ecosystems due to project activities and implementation measures. This has been confirmed by the VVB during the on-site audit. Hence, not applicable.
Soil degradation and soil erosion	As stated above, the project activity involves distribution of clean energy products to households, communities, institutions, SMEs etc. Moreover, installations of the SPV, SLS or SWHS is done on rooftops and hence, does not cause any disturbances to the soil. This has been confirmed by the VVB during the onsite audit. Therefore, the project does not have any negative impacts such as soil degradation or soil erosion and there are no risks associated in this regard due to the project activities and their implementation measures. Hence, not applicable.
Water consumption and stress	In accordance with the reasons stated above, since the project involves distribution of clean energy products in households, institutions, communities, and SMEs. The systems within this grouped project are based on solar power and therefore lead to no harm on water consumption or lead to any water stress. In fact, in comparison to conventional power plants, energy generation using solar PV reduces water requirement and consumption due to no need for it being used for cooling purposes or in boilers etc. This has been confirmed by the VVB during the on-site audit. Therefore, the project neither has any negative impacts on water consumption, nor will it lead to any water related stress. Hence, not applicable.

4.2.8.1 Rare, Threatened, and Endangered species

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Species or habitat	This grouped project does not and has not adversely impacted habitats and areas needed for habitat connectivity for rare, threatened, or endangered species during the monitoring period. The clean energy products (SLS, SWHS and SPV) distributed to households, communities, institutions, or SMEs are typically placed on rooftops, open area, and are not located in, or adjacent to habitats for rare, threatened, or endangered species. This has been checked by the verification team during the onsite audit.
Areas needed for habitat connectivity	As per the reasons stated above, the grouped project activity does not adversely impact areas needed for habitat connectivity during the monitoring period.

	Evidence gathering activities, evidence checked, and assessment conclusion
Habitats for rare, threatened, and endangered species	NA as per the reasons stated above.
Areas for habitat connectivity	NA as per the reasons stated above.

4.2.8.2 Introduction of Species

Species introduced	Evidence gathering activities, evidence checked, and assessment conclusion
NA	This project involves distribution and installation of SPV, SLS and SWH systems in households, communities, institutions, SMEs etc. Therefore, it does not involve any planting or introduction of any new species Hence, not applicable.

Existing invasive species	Evidence gathering activities, evidence checked, and assessment conclusion
NA	As stated above, this project involves distribution and installation of SPV, SLS and SWH systems in households, communities, institutions, SMEs etc. therefore, the project does not involve any activity or implementation measure that will cause any existing invasives to thrive. Neither does it involve the usage of any non-native species. Hence, not applicable.

	Evidence gathering activities, evidence checked, and assessment conclusion
Invasive species	NA (This project does not involve the introduction or usage of any invasive species.)

4.2.8.3 Ecosystem conversion

Item	Evidence gathering activities and evidence checked
Ecosystem conversion	NA (This grouped project is not an ARR, ALM, WRC or ACoGS project)

4.3 Accuracy of Reduction and Removal Calculations

This grouped project applies three methodologies: AMS-III. AR version 05.0, AMS-I. J version 01, and AMS-I. F version 03. The equations and choices provided in the methodologies as well as all other methodological tools, are correctly quoted in the Monitoring report /01/. The emission reductions of the project are calculated using the requirements and formulae mentioned and as per the applied methodologies. The verification team reviewed the emission reduction spread sheets (ER sheet) /02/ and checked all the formulae, concluding that they are correct and in accordance with the monitoring plan of the PD and the applied monitoring methodology.

According to applied methodologies the emissions are calculated as below:

Baseline Emission: The net baseline emissions for the entire grouped project is being calculated using the formula:

$BE_{grouped\_project,y} = BE_{solar\_lights,y} + BE_{SWH\_systems,y} + BE_{PV,y}$

Where:

$BE_{grouped\_project,y}$ = *Baseline emissions of the grouped project in period y (tCO2e/year)*

$BE_{solar\_lights,y}$ = *Baseline emissions of the solar lights in period y (tCO2e/year)*

$BE_{SWH\_systems,y}$ = *Baseline emissions of the solar water heating systems in period y (tCO2e/year)*

$BE_{PV,y}$ = Baseline emissions of the PV systems in period y (tCO2e/year)

AMS III. AR version 5.0: (SLS)

According to paragraphs 20 and 21 of AMS III AR version 5.0, the baseline emissions are being calculated using the following:

$BE_{per\_lamp,y} = DV \times GF_y \times DB_y$

Where:

$BE_{per\_lamp,y}$ = Baseline emissions per project lamp in period y (tCO2e/year)

DV = Lamp Emission Factor (default is 0.092 tCO2e per project lamp)16

GF_y = Grid Factor in year y,

- Equal to 1.0 when charging option defined in paragraph 3(a) of the methodology is used.17

DBy = Dynamic Baseline Factor (change in baseline fuel, fuel use rate, and/or utilization during crediting period) in year y. Calculated as either:

- Option 1: default of 1.0 in the absence of relevant information.

The total baseline emissions for the solar lighting system is being calculated based on equation 5 of the applied methodology:

$$ER_{y=}\Sigma N_{i,j\ i,j} \times (BE_{y,i} - PE_{y,i,j}) \times (OF_{y,i,j})$$

However, as per paragraph 23 of the methodology, 23, "There are no project emissions (PEy = 0) if the project lamp charging mechanism utilized

is as defined in:

(a) Paragraph 3(a); or

(b) Paragraph 3(b) if the minigrid or distributed generation system is entirely powered

by renewable energy generation unit(s)."

Therefore, the formula has been described as follows:

Therefore, baseline emissions from SWH can be described as follows:
$BE_{solar\_lights,y} = \Sigma_{i,j} (Ni,j \times BE_{per\_lamp,y} \times OF_{y,i,j})$

Where:

$N_{i,j}$ = Number of project lamps distributed to end users of type i with charging method j.

$OF_{y,i,j}$ = Percentage of project lamps distributed to end users that are operating and in service in year y, for each lamp type i and charging method j. Assumed to be equal to 100 per cent for years 1, 2 and 3, and equal to 96 per cent, for years 4, 5, 6 and 7

AMS I J version 1.0 (SWHS)

In accordance with section 10 (c) of the applied methodology AMS I J version 1.0, the baseline emissions from SWH can be described as follows:

$BE_{SWH\_systems,y} = \Sigma k\ (Ak \times ES_{stipulated} \times OF_{y,k}) \times kWh2MWh \times EF_{CO2,elec,k,y} / (1\text{-}TD_y)$
Where:

Ak = Collector area of SWH system k (m2)

ESstipulated = Stipulate energy demand saving (kWh/m2); a value of 450 kWh/m2 is taken in line with option (i) of the methodology for all installations in the identified higher-use areas, 300 kWh/m2 in line with option (ii) in all other areas.

$OF_{y,k}$ = Percentage of SWH systems k distributed to end users that are operating and in service in year y

kWh2MWh = Conversion factor from kWh demand savings to MWh; 1/1000 kWh/MWh

$EF_{CO2,elec,k,y}$ = Emission factor for displaced electricity by system k, calculated as required in the methodology in accordance with AMS-I.D (which requires the use of the "Tool to calculate the emission factor for an electricity system" (the "Tool")) (tCO_2e/MWh).

TD_y = Average annual technical grid losses (transmission and distribution) during year y for the grid serving the locations where the devices are installed, expressed as a fraction.

AMS I F, version 3.0 (SPV)

According to the applied methodology AMS I F version 03.0, the baseline emissions are calculated as follows:

$BE_{PV,y} = EG_{m,y} * EF_{CO2,y}$

Where:
$EG_{m,y}$ = Quantity of net electricity displaced as a result of the implementation of the project activity in year y (MWh)
$EF_{CO2,y}$ = Emission factor ($t\ CO_2/MWh$) Emission factor of national grid calculated as per the procedures provided in AMS-I.D.

Project Emissions: According to the applied methodologies the project emissions $PE_{grouped\_project,y}$ has been taken as zero for the SPV, SLS and SWHS.

Leakage Emissions: In accordance with the three applied methodologies leakage $LE_{grouped\_project,y}$ *i*s considered as zero.

Net GHG Emission Reductions and Removals:

Emission reductions are calculated as follows:

$ER_{grouped\_project,y} = BE_{grouped\_project,y} - PE_{grouped\_project,y} - LE_{grouped\_project,y}$

Where:

$ER_{grouped\_project,y}$ = Emission reductions of the grouped project in period y (tCO_2e)

Sampling Approach:

The sampling plan implemented by the PP is in accordance with the applied approved monitoring methodology AMS I J /B02/ and the VCS PD /03/. The PP has appropriately performed random sampling procedure due to the large number of products distributed.

The PP has appropriately performed Simple random sampling procedure, reliability levels were set at 90 confidence and 10 precision in line with the applied methodologies/B02/.

The sampling surveys have been carried out by the well-trained personnel /10/. The parameters OFy,k was monitored through monitoring sample surveys. Monitoring of the parameters ensures compliance with the applied methodology AMS-I. J. version 01.0 /B02/. Verification team has checked the survey records /04/ and sample size calculation/02/. Parameter OFy,k monitors the 'Percentage of SWH systems k distributed to end users that are operating and in service in period y.'

Parameter	Description of Parameter	Sample size	
OFy,k	Percentage of SWH systems k distributed to end users that are operating and in service in period y	Monitoring Period	Calculated Sample Size
		01-Jan-2019 to 31-Dec-2019	30
		01-Jan-2020 to 31-Dec-2020	30
		01-Jan-2021 to 31-Dec-2021	37
		01-Jan-2022 to 31-Dec-2022	48

PP has applied sampling for the current monitoring period. A confidence/precision level of 90/10 has been applied by the PP for all the monitoring parameters determined through applying simple random sampling. This is in accordance with the sampling plan provided in the registered VCS PD /03/.

As per paragraph 25 of the Sampling Standard, version 09 /B04/, the verification team has to verify whether the project participants entity have implemented the sampling and surveys according /06/ to the sampling plan in the registered monitoring plan. The verification includes determining:

(a) Whether the required confidence/precision has been met;

(b) Whether the selected sample was representative of the population.

In accordance with paragraph 26, VVB has applied a sampling approach for on-site visits as a part of the verification. As per paragraph 28, VVB has applied acceptance sampling as described in the steps indicated in paragraphs 29–33 as part of verification activities, as described below:

During verification, the verification team has applied acceptance sampling to determine the operational status of the SWHS systems in the households.

A sample size of 18 SWH systems was chosen using table 2 of the sampling standard, version 09 /B04/. A sample size of 18 was determined, based on an AQL of 1.0 % and UQL of 20 %; producer risk of 10 % and consumer risk of 10% in determining the VVB's sample size. Acceptance number (c) thus determined for the sample is 1.

18 samples were randomly chosen by the VVB out of the PP's samples. Accordingly, VVB has inspected 18 SWHS systems.

It was observed that out of the 18 systems, all the 18 systems were found to be operational, and this matched with the PP's records and hence no discrepant records were observed with the MR /01/ and ER sheet /02/. Thus, PP's set of records has been accepted in line with § 33 of the sampling standard, version 09.0/B04/.

The results of PP's monitoring survey as verified by the VVB are summarised in the table below.

Monitoring Parameter	Sample size		Actual Samples surveyed		Precision achieved	
OFy,k	**Monitoring Period**	**Sample Size**	**Monitoring Period**	**Sample Size**	**Monitoring Period**	**Precision**
	01-Jan-2019 to 31-Dec-2019	30	01-Jan-2019 to 31-Dec-2019	109	01-Jan-2019 to 31-Dec-2019	0.13
	01-Jan-2020 to 31-Dec-2020	30	01-Jan-2020 to 31-Dec-2020	104	01-Jan-2020 to 31-Dec-2020	0.18

	01-Jan-2021 to 31-Dec-2021	37	01-Jan-2021 to 31-Dec-2021	94	01-Jan-2021 to 31-Dec-2021	0.21
	01-Jan-2022 to 31-Dec-2022	48	01-Jan-2022 to 31-Dec-2022	99	01-Jan-2022 to 31-Dec-2022	0.21

The sample size calculation provided by PP is checked by the verification team and deemed acceptable in line with Standard – "Sampling and Surveys for CDM project activities and programme of activities" ,Version 09.0. Simple random sampling has been appropriately applied by the PP for selection of the monitoring samples with 90/10 confidence/precision for determining the sampling for all the parameters which is deemed acceptable as per the VCS PD /03/ as well as from supporting documents submitted. Hence, this is acceptable to the verification team.

Emission reductions have been calculated in accordance with the applied methodology VMR0006 version 1.1 /B02/, and VCS PD /03/. The PP has used monitored data and ex-ante fixed data including default values as mandated/permitted by the applied methodology. The values used for calculation of GHG emission reductions have been thoroughly checked by the verification team and was found appropriate and correct.

Thus, PP's set of records has been accepted in line with § 33 of the sampling standard, version 09.0/B04/.

Assessment of the monitored parameter.

Parameter	How the PP conducted sampling surveys (to obtain the project participants' or the coordinating/managing entities' records)	How the VVB could obtain records for verification	Criteria for deciding what ultimately constitutes a discrepancy
OFy,k (Percentage of SWH systems k distributed to end users that are operating	Sampling based survey (questionnaire survey/interviews/inspection) Visual inspection of the premises to see if the SWHS is operational and in use.	Cross-check of a sample of project participants' samples (questionnaire operation surveys/interviews) including but not limited to following: • Consistency between the information as contained in Survey	VVB results, accounting for duly justified differences.

and in service in period y)	Interview with end user if required to verify that ICS is still in use [Yes/No].	sheet and revealed from the on-site interviews. • Operational status of the project device at the time survey was conducted.	

Parameters determined ex- ante:

The following parameters are determined ex-ante and mentioned in section 4.1 of the VCS PD/03/

Parameter	Unit	Value	Assessment
AMS-III.AR Solar lamps			
DV	tCO_2e per project lamp (per year)	0.092	-Fixed ex-ante -The value is a methodology default and is in accordance with the registered PD.
GFy	-	1.0	- Fixed ex-ante -This value is in accordance with the options given in the methodology for the chosen charging option as per paragraph 3(a).and also in accordance with the registered PD.
DBy	-	1.0	- Fixed ex-ante - This value is a methodology default (option 1) and with the registered PD.
AMS-I. J SWH systems			
$ES_{stipulated}$	kWh/m2	• 450 (option i) in the southern areas of Karnataka (defined as the Bangalore and Mysore administrative divisions of Karnataka) • 300 (option ii) in all other areas.	- Fixed ex-ante - These are default values as prescribed by the Stipulated energy saving method in the applied methodology and is also in accordance with the registered PD..
TDy	%	10	- Fixed ex-ante - Default values from the methodology.
EFCO2,elec,y	tCO_2e/MWh	0.98 tCO_2e/MWh	- Fixed ex-ante -Calculated as required in the methodology in accordance with AMS-I. D (which requires the use of the "Tool to calculate the emission factor for an electricity system") and is also in accordance with the registered PD.

AMS-I. F PV systems			
EFCO2,y	tCO_2e/MWh	0.98	- Fixed ex-ante - calculated as required in the methodology in accordance with AMS-I.D (which requires the use of the "Tool to calculate the emission factor for an electricity system") and is also in accordance with the registered PD.

The spread sheet submitted by the PP clearly and transparently mentions values of the data parameters used for calculation of emission reductions. The input values have been verified from reliable and authentic sources including monitoring records /04/, installation database /05/, Monitoring Report /01/, and applied methodology /B02/. The emission reductions calculated were compared with the emission reduction spread sheet /02/ and found to be correct. No significant reporting risks have been identified for the data reported.

The details of monitoring parameters used for calculation of emission reductions are provided below:

Parameters monitored ex-post:

AMS-III.AR (SLS)

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Data / Parameter: (as in monitoring plan of VCS PD):	Number of project lamps distributed to end users of type i with charging method j ($N_{i,j}$)
Measuring frequency/Time Interval:	Continuous
Reporting frequency:	Continuous
Reported value:	89,991
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Details of monitoring equipment:	Value obtained from SLS Sales records /05/. The sales data has been exported and collated in excel spreadsheets provided to the verification team.
Is accuracy of the monitoring equipment as stated in the VCS PD? If the VCS PD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	NA

Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	NA
Is the calibration interval in line with the monitoring plan of the VCS PD? If the VCS PD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	NA. QA/QC procedures stated in MR comply with VCS PD /03/
Company performing the calibration(internal or external calibration):	NA
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	NA
Is (are) calibration(s) valid for the whole reporting period?	NA
If applicable, has the reported data been cross-checked with other available data?	Yes, the reported data in MR has been compared with the sales database and the ER sheet /02/ and has been found consistent. Yes, verification team cross-checked the sales records spreadsheets/05/ and product serial numbers supplied by the manufacturer and/or receipts /warrantee cards maintained by PP.
How were the values in the monitoring report verified?	The values in the monitoring report were verified through review of the sales records spreadsheets provided by the PP which contained details regarding: name/identification of the end user, contact details, product details, location, serial ID of the device and the date of distribution/ installation. Additionally, through interviews during the onsite audit, with representatives of the PP and the distribution personnel regarding the mechanism for distribution and database maintenance it was determined that the

	parameter is sufficiently proven, accurate and acceptable to the verification team.
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Data / Parameter: (as in monitoring plan of VCS PD):	Percentage of project lamps distributed to end users that are operating and in service in year y, for each lamp type i and charging method j. ($OF_{y,i,j}$)
Measuring frequency/Time Interval:	NA
Reporting frequency:	NA
Reported value:	Year 1-3: 100% (methodology default) Year 4-7: 96% (Fixed in the third year of the crediting period)
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Details of monitoring equipment:	Methodology default value is being used for years 1-3 and for the rest the value which is being used has already been fixed in the third year of the crediting period which is in accordance with the applied methodology.
Is accuracy of the monitoring equipment as stated in the VCS PD? If the VCS PD does not specify the accuracy of the monitoring	NA

equipment, does the monitoring equipment represent good monitoring practise?	
Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	NA
Is the calibration interval in line with the monitoring plan of the VCS PD? If the VCS PD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	NA.
Company performing the calibration(internal or external calibration):	NA
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	NA
Is (are) calibration(s) valid for the whole reporting period?	NA
If applicable, has the reported data been cross-checked with other available data?	Yes, the reported data in MR is found to be in line with the applied methodology. The reported values are in line with default values specified by the methodology and are reported consistently across MR and ER sheet.
How were the values in the monitoring report verified?	In accordance with the applied methodology, AMS-III. AR., the value of the parameter is taken as 100% for the first 3 years (default value) and for the years beyond that, the value has been determined based on monitoring conducted in the third year of the crediting period. The value obtained is applicable for the remaining crediting period. This is hence in compliance with the requirements of the monitoring plan and the applied methodology. The value for this monitoring period has been verified through review of the sales records spreadsheets provided by PP.

	Additionally, through the on-site assessment, via interviews with the representatives of PP regarding the mechanism for maintenance of the database, it was determined that the value has been accurately represented and is hence acceptable to the verification team.
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Data / Parameter: (as in monitoring plan of VCS PD):	Calculated average lamp operation years in the monitoring period (Lamp.year,y)
Measuring frequency/Time Interval:	Continuous
Reporting frequency:	Continuous
Reported value:	<table><tr><td>Monitoring year</td><td>Lamp year, y</td></tr><tr><td>2019</td><td>74,267</td></tr><tr><td>2020</td><td>74,267</td></tr><tr><td>2021</td><td>61,961</td></tr><tr><td>2022</td><td>66,033</td></tr></table>
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Details of monitoring equipment:	The values have been obtained from the project database (sales records). The sales data has been exported and collated in excel

	spreadsheets/05/ provided to the verification team.
Is accuracy of the monitoring equipment as stated in the VCS PD? If the VCS PD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	NA
Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	NA
Is the calibration interval in line with the monitoring plan of the VCS PD? If the VCS PD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	NA.
Company performing the calibration(internal or external calibration):	NA
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	NA
Is (are) calibration(s) valid for the whole reporting period?	NA
If applicable, has the reported data been cross-checked with other available data?	Yes, the reported data in MR has been compared with the project database and the ER sheet /02/ and has been found consistent.
How were the values in the monitoring report verified?	Through review of the sales records spreadsheets/05/ provided by PP.
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity	NA

parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	

AMS-I.J (SWH)

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Data / Parameter: (as in monitoring plan of VCS PD):	Collector area of SWH system k (Ak)
Measuring frequency/Time Interval:	Once at installation
Reporting frequency:	Once at installation
Reported value:	42,475 m^2
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Details of monitoring equipment:	The values have been obtained from the project database (sales records). The sales data has been exported and collated in excel spreadsheets /05/ provided to the verification team.
Is accuracy of the monitoring equipment as stated in the VCS PD? If the VCS PD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	NA
Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	NA
Is the calibration interval in line with the monitoring plan of the VCS PD? If the VCS PD does not specify the frequency of calibration,	NA.

does the selected frequency represent good monitoring practise?	
Company performing the calibration(internal or external calibration):	NA
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	NA
Is (are) calibration(s) valid for the whole reporting period?	NA
If applicable, has the reported data been cross-checked with other available data?	Yes, the reported data in MR has been compared with the project sales database /05/ and the ER sheet /02/ and has been found consistent. Additionally, VVB has cross-checked the sample bills of the project devices.
How were the values in the monitoring report verified?	The values of this parameter for the monitoring period have been confirmed through review of the sales records spreadsheets/05/ provided by PP. Further, during the on-site assessment, the verification team has conducted acceptance sampling on the PP's monitoring samples and cross checked the values reported for the 18 SWH systems chosen randomly. It was also found that the values have been consistently reported across the MR, ER spreadsheet and the database. Additionally, through interviews with the PP's representatives and the monitoring personnel regarding mechanism of data collection, sampling, monitoring and database maintenance, it has been determined that the values for this monitoring period have been appropriately reported.
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data	Yes, the data management ensures correct transfer of data and reporting of emission

and reporting of emission reductions and are necessary QA/QC processes in place?	reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Data / Parameter: (as in monitoring plan of VCS PD):	Percentage of SWH systems k distributed to end users that are operating and in service in period y (OFy,k)
Measuring frequency/Time Interval:	Each monitoring season
Reporting frequency:	Each monitoring season
Reported value:	2019 - 90.83% 2020 – 86.54% 2021 - 86.02% 2022 - 85.86%
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Details of monitoring equipment:	The values are determined through annual monitoring survey.
Is accuracy of the monitoring equipment as stated in the VCS PD? If the VCS PD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	NA
Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	NA

Is the calibration interval in line with the monitoring plan of the VCS PD? If the VCS PD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	NA.
Company performing the calibration(internal or external calibration):	NA
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	NA
Is (are) calibration(s) valid for the whole reporting period?	NA
If applicable, has the reported data been cross-checked with other available data?	Yes, the reported data in MR has been compared with the sampling survey /04/ sheet and the ER sheet /02/ and confirmed during the on site visit and has been found consistent.
How were the values in the monitoring report verified?	The values for this parameter have been confirmed by the verification team based on the review of the VCS MR/01/ and the sampling/survey sheet/04/ and further during the on site audit with representatives of PP and end users to confirm the above. The verification team conducted acceptance sampling on the PP's monitoring samples and based on the interviews with the end users it was found that the values have been consistently reported without any discrepant records. Further, based on interviews with the representative of the PP and the monitoring personnel regarding the mechanism of sampling, monitoring, data collection and database maintenance it has been assessed that the values have been reported accurately and is hence acceptable to the verification team.

Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Data / Parameter: (as in monitoring plan of VCS PD):	Calculated average SWH system operation years in the monitoring period (System.year,y)
Measuring frequency/Time Interval:	Continuous
Reporting frequency:	Continuous
Reported value:	<table><tr><th>Monitoring Season</th><th>Weighted average System.year,y</th></tr><tr><td>2019</td><td>1.00</td></tr><tr><td>2020</td><td>1.00</td></tr><tr><td>2021</td><td>0.93</td></tr><tr><td>2022</td><td>0.95</td></tr></table>
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Details of monitoring equipment:	The values have been obtained from the sales database (sales record which includes the sales and commissioning dates)/05/. The sales data has been exported and collated in excel spreadsheets/04/ provided to the verification team.
Is accuracy of the monitoring equipment as stated in the VCS PD? If the VCS PD does not	NA

specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	
Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	NA
Is the calibration interval in line with the monitoring plan of the VCS PD? If the VCS PD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	NA.
Company performing the calibration(internal or external calibration):	NA
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	NA
Is (are) calibration(s) valid for the whole reporting period?	NA
If applicable, has the reported data been cross-checked with other available data?	Yes, the reported data in MR has been compared with the sales database /05/ and the ER sheet /02/ and has been found consistent. Yes, during remote interviews and the document review the verification team cross-checked the sales records spreadsheets/05/ with the electronic database of sales records/09/ maintained by PP.
How were the values in the monitoring report verified?	The values for this monitoring period have been confirmed through review of the sales records spreadsheets provided by PP. Additionally, the verification team also conducted acceptance sampling of 18 SWH systems out of the PP's monitoring samples and it was found that the values have been

	consistently reported without any discrepant records. Further, through interviews with the representatives of PP and the monitoring personnel regarding the mechanism for data collection, monitoring and maintenance of the database, it was determined that the values have been accurately represented and is hence acceptable to the verification team.
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

AMS-I. F PV systems

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Data / Parameter: (as in monitoring plan of VCS PD):	Quantity of net electricity displaced in year y (Egy)
Measuring frequency/Time Interval:	Continuous monitoring, hourly measurement, and at least monthly recording
Reporting frequency:	Continuous
Reported value:	Monitoring Season / Egy (MWh) 2019 / 1,968 2020 / 1,974 2021 / 2,606 2022 / 5,260
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes

Details of monitoring equipment:	PP has involved the requirements of the approved methodology deviation provided in the VCS PD according to which the daily generation from each solar PV installation shall be considered to be conservative value of 4 kWh/day per kWp installed. The number of PV system installed during the monitoring period has been verified through the document review the of the sales records spreadsheets /05/ with the electronic database of sales records /09/ maintained by PP.
Is accuracy of the monitoring equipment as stated in the VCS PD? If the VCS PD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	NA
Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	NA
Is the calibration interval in line with the monitoring plan of the VCS PD? If the VCS PD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	NA.
Company performing the calibration(internal or external calibration):	NA
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	NA
Is (are) calibration(s) valid for the whole reporting period?	NA
If applicable, has the reported data been cross-checked with other available data?	The number of PV system installed during the monitoring period has been verified through the document review the of the sales records spreadsheets /05/ with the electronic

	database of sales records /09/ maintained by PP.
How were the values in the monitoring report verified?	The values have been confirmed through review of the VCS PD/03/. The values for this monitoring period have been obtained from the product of total wattage in kW with the product year, the Default PV electricity generation (4 kWh/kWp/day)(Fixed Ex ante and is a methodology default), multiplied by 365. The total wattage has been obtained by from the wattage per module multiplied by the number of modules installed. Therefore, the number of PV systems installed during the monitoring period has been verified through the review of the sales records spreadsheets/05/ and with the electronic database of sales records/09/ maintained by PP. Additionally, through interviews during the onsite audit, with representatives of the PP and the distribution personnel regarding the mechanism for distribution and database maintenance it was determined that the parameter is sufficiently proven, accurate and acceptable to the verification team
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

The GHG emission reductions or removals generated by the grouped project have not been included in any emissions trading program or any other mechanism that includes GHG allowance trading. The project has not received or sought any other form of environmental credit or has become eligible to do so since validation or previous verification. The project has not participated or been rejected under any other GHG programs since validation. There is no material discrepancy found between the information in the VCS PD/03/, MR/01/ and related supporting documents /03/-/23/ and the monitoring system of the project activity. The grouped project has proposed two methodological deviations during the validation period which have been accepted by the validating DOE and included in the registered VCS PD. The list of methodological deviations and assessment of their continued application has been provided in section 3.1 above.

Hence, the verification team confirms that the project has been implemented as described in the project description in the registered VCS PD.

4.4 Quality of Evidence to Determine Reductions and Removals

When verifying the report emission reduction, CCIPL ensured that there was a clear audit trail that contained the evidence and records that validate the stated figures. All source documents that form the basis for assumptions and other information underlying the GHG data are shown above.

When assessing the audit trails, CCIPL also examined:

1. Whether sufficient evidence was available, both in terms of frequency and in covering the full monitoring period

2. The source and nature of the evidence

3. If comparable information was available from sources other than that used in the monitoring report, CCIPL cross-checked the monitoring report against the other sources to confirm that the stated figures were correct. The sources and the data referenced are shown in Appendix 1.1 below.

CCIPL also assessed that the data collection system met the requirements of the monitoring plan as per the applied methodology.

Proper data management inclusive of data acquisition and aggregation, data management system is being followed for the project activity.

The monitoring personnel at site are well trained and follow reproducible routines. Thus, they are competent to carry out the relevant tasks with sufficient accuracy.

The quality of supporting documents that are provided by the PP as evidence is adequate. Raw values from electronic monitoring system/03/ is provided, which tallies with the data provided in the emission reduction calculation sheet/02/.

Competent employees are recruited for the management and operation of the project. The quality of supporting evidences submitted to VVB for verification is adequate and found to be verifiable. Sales records/04/, /05/, Maintenance records/20/ and other supporting documents related to quality and maintenance were checked by the verification team during the site visit to confirm the authenticity of the documents and to check the correctness of the calculations. Sample copies of these documents are also obtained by the verification team for the records and future reference. The detailed information flow with the roles and responsibilities of the individuals and the monitoring system have been discussed and found to be appropriate.

Verification team confirms that the quantity and quality of evidence to determine the GHG reductions and removals produced was found to be satisfactory .

4.5 Non-Permanence Risk Analysis

Not applicable since this project is a non-AFOLU project.

5 VERIFICATION OPINION

5.1 Verification Summary

The Project Participant, Selco Solar Pvt Ltd, has commissioned the VVB, Carbon Check (India) Private Ltd. to perform the 4th periodic verification of the VCS Project Activity "SELCO CLEAN ENERGY PRODUCTS GROUPED PROJECT" for the period 01-January-2019 to 31-December-2022. This report summarizes the findings of the verification of the project, performed based on VCS criteria, as well as criteria given to provide for consistent project operations, monitoring, and reporting.

The project participants of the project are responsible for:

- The preparation of greenhouses gas emissions data and the reported greenhouse gas emission reductions from the project on the basis set out in the monitoring plan contained in the monitoring report.

- The development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of greenhouse gas emission reductions of the project.

Based on documented evidence and corroborated by an on-site assessment, CCIPL confirms that:

- the project has been implemented and operated as per the design document.

- the monitoring report and other supporting documents provided are complete and verifiable and in accordance with the applicable VCS requirements.

- the monitoring is in place as per the applied baseline and monitoring methodology /B02/.

It is CCIPL's opinion that the GHG emission reduction stated in the monitoring report version 3.0 of 09-August-2024 for the project "SELCO CLEAN ENERGY PRODUCTS GROUPED PROJECT" VCS 1495 for the period from 01January-2019 to 31-December-2022 are fairly stated. The GHG emission reductions were calculated correctly based on the approved monitoring methodologies. and the monitoring plan contained in the MR, version 3.0 of 09-August-2024 and was found to be 88,236 tCO2 eq.

The verification team assigned by Carbon Check (India) Private Ltd concludes that the project activity as described in the VCS PD /03/ and the Monitoring report /01/, meets all relevant requirements of VCS and declares that the verification was conducted in accordance with VCS version 4 requirements/B01/.

5.2 Verification Conclusion

Carbon Check (India) Private Ltd concludes the verification with a positive opinion that the VCS Project Activity "SELCO CLEAN ENERGY PRODUCTS GROUPED PROJECT" as described in the VCS MR (version 1.0, dated 20/06/2024) /01/, meets all the applicable VCS requirements, including those specified in the Project Standard, relevant methodology, tools and guidelines.

The selected baseline and monitoring methodology /B02/ (VMR0006, Version 1.1) is applicable to the project and correctly applied. VVB confirms that the project has been implemented in accordance with the Monitoring report /01/.

Verification period: From 01-January-2019 to 31-December-2022

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

Vintage period	Baseline emissions (tCO_2e)	Project emissions (tCO_2e)	Leakage emissions (tCO_2e)	Reduction VCUs (tCO_2e)	Removal VCUs (tCO_2e)	Total VCUs (tCO_2e)
01-Jan-2019 to 31-Dec-2019	20,949	0	0	20,949	0	20,949
01-Jan-2020 to 31-Dec-2020	20,339	0	0	20,339	0	20,339

01-Jan-2021 to 31-Dec-2021	20,840	0	0	20,840	0	20,840
01-Jan-2022 to 31-Dec-2022	26,108	0	0	26,108	0	26,108
Total	88,236			88,236		88,236

VVB is of the opinion that the project has been implemented in accordance with the project description, the MP complies with the approved monitoring methodology, the monitoring complies with the MP and the monitored data and calculation of ERs are assessed and confirmed as correct. Therefore, CCIPL hereby certifies, and requests the issuance of, the reported ERs during the monitoring period of 01-January-2019 to 31-December-2022 amounting to 88,236 tCO2e to the VCS Registry.

5.3 Ex-ante vs Ex-post ERR Comparison

Vintage period	Ex-ante estimated reductions/ removals	Achieved reductions/ removals	Percent difference	Explanation for the difference
01-Jan-2019 to 31-Dec-2019	38,962	20,949	46% lower	The primary reason for lower VCUs in the current monitoring period attributed to lower clean energy products distribution than envisaged ex-ante
01-Jan-2020 to 31-Dec-2020	46,783	20,339	57% lower	
01-Jan-2021 to 31-Dec-2021	54,605	20,840	62% lower	
01-Jan-2022 to 31-Dec-2022	60,749	26,108	57% lower	
Total	2,01,099	88,236	56% lower	

APPENDIX 1: COMMERCIALLY SENSITIVE INFORMATION

No Commercially sensitive information provided by the PP during this monitoring period.

APPENDIX 1.1: DOCUMENTS REFERENCED

S. No.	Documents
1.	Monitoring report version 1.0 dated 20-June-2024 Monitoring report version 3.0 dated 09-August-2024
2.	Emission reduction calculation sheet corresponding to #1 Emission reduction calculation sheet corresponding to #2
3.	Registered VCS PD, ex-ante ER calculation sheet and corresponding validation report.
4.	Survey records for monitoring parameters.
5.	Sales Distribution records containing: • Name/Identification of end user. • The phone number of the end-user (if available). • Geographical location (fixed address, if possible, alternatively some other means of locating the stove could be used – e.g. address of church to which the person belongs). • Product detail (e.g. type of solar light, capacity of SWH, or Wp of PV). • Serial ID number of the product. • Date of distribution / installation.
6.	Manufacturer/ technical specifications of the project technologies
7.	Sample sales invoice/ receipts issued to end user
8.	Proof of right of use of carbon credits
9.	Electronic database (maintained by PP) of project equipment sold pertaining to all three methodologies for both old and new project instances
10.	Training Manual and training records of distribution and monitoring personnel
11.	Proof of Carbon Credits waived off by end user- Warranty cards
12.	Sampling Calculator for sample size, and precision level
13.	Evidence for random number generator for sampling
14.	CME Manual for the PP along with Organization Structure
15.	Copy of agreement between Selco Solar Pvt. Ltd. (Selco) and Natural Capital Partners Limited (NCP).
16.	Grievance Register
17.	Records of battery use and disposal.
18.	Employment generation records
19.	Proof of number of systems installed under the DE and LFE program.
20.	Warranty and maintenance records
21.	Monitoring report and corresponding verification report for MP 3
22.	Communication of monitored results to stakeholders
23.	HR policies

Other documents referenced:

Ref no.	Reference Document
/B01/	VCS Requirements: a) VCS Program Guide (v4.5) b) VCS Standard (v4.7) c) Program Definitions (v 4.5) d) Registration & Issuance Process (v 4.5) e) VCS Validation and Verification Manual (v 3.2, dated 19/10/2016)
/B02/	Applied baseline and monitoring methodologies: a) AMS-I.F.- Renewable electricity generation for captive use and mini-grid --- Version 3.0 b) AMS I.J.- Solar water heating systems (SWH) --- Version 1.0 c) AMS III.A.R.- Substituting fossil fuel- b a s e d lighting with LED/CFL lighting systems --- Version 5.0
/B03/	Websites referred: a) http://cdm.unfccc.int b) http://www.v-c-s.org c) https://registry.goldstandard.org/projects?q=&page=1 d) Google maps (http://maps.google.com)
/B04/	a) "Standard for sampling and surveys for CDM project activities and programme of activities" (version 09.0) Guidelines for sampling and surveys for CDM project activities and Programme of Activities (version 04)

APPENDIX 2: ABBREVIATIONS

CER	Certified Emission Reduction
CAR	Corrective Action Request
CCIPL	Carbon Check (India) Private Ltd.
CDM	Clean Development Mechanism
CL	Clarification Request
CO2	Carbon Dioxide
CO2e	Carbon Dioxide Equivalent
DVR	Draft Verification Report
EB	CDM Executive Board
EF	Emission Factor
FAR	Forward Action Request
FVR	Final Verification Report
GHG	Greenhouse gas(es)
GWh	Giga Watt Hour
IPCC	Intergovernmental Panel on Climate Change
MWh	Mega Watt Hour
QC/QA	Quality control/Quality assurance
TA	Technical Area
TR	Technical Review
SHLS	Solar Home Lighting Sytems
SPV	Solar photovoltaic
SWH	Solar water heater
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Verified Carbon Standard
VVB	Validation / Verification Body

APPENDIX 3: CERTIFICATES OF COMPETENCE

Carbon Check (India) Private Limited

Certificate of Competency

Mr. Campal Deepak Kadam

has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

for the following functions and requirements:

☒ Validator	☒ Verifier	☒ Team Leader	☒ Technical Expert
☐ Technical Reviewer	☐ Health Expert	☐ Gender Expert	☐ Plastic Waste Expert
☐ CCB Expert	☐ Legal Expert	☐ Financial Expert	☐ Environmental, Health and Safety financial matters
☐ SDG+	☐ Social no-harm(S+)	☐ Environment no-harm(E+)	
☒ Local Expert for India			

in the following Technical Areas:

☐ TA 1.1	☒ TA 1.2	☐ TA 2.1	☒ TA 3.1	☐ TA 4.1
☐ TA 4. n	☐ TA 5.1	☐ TA 5.2	☐ TA 7.1	☐ TA 8.1
☐ TA 9.1	☐ TA 9.2	☐ TA 10.1	☒ TA 13.1	☒ TA 13.2
☐ TA 14.1	☐ TA 15.1	☐ TA 16.1		

Issue Date

5th December 2023

Expiry Date

31st December 2024

Priya Suman

Ms. Priya Suman
Compliance Officer

Sanjay Agarwalla

Mr. Sanjay Kumar Agarwalla
Technical Director

Revision History of the document:

Revision date	Summary of changes
Dec 2023	Initial Adoption

CCIPL_FM 7.9 Certificate of Competency_V4.0_112023

[1] Please refer to previous version of FM 7.9 for the revision history

Carbon Check (India) Private Limited

Certificate of Competency

Mr. Sanjay Kumar Agarwalla

has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

for the following functions and requirements:

☒ Validator	☒ Verifier	☒ Team Leader	☒ Technical Expert
☒ Technical Reviewer	☐ Health Expert	☐ Gender Expert	☐ Plastic Waste Expert
☐ CCB Expert	☐ Legal Expert	☒ Financial Expert	☐ Environmental, Health and Safety financial matters
☒ SDG+	☒ Social no-harm(S+)	☒ Environment no-harm(E+)	
☒ Local Expert for India and Bangladesh			

in the following Technical Areas:

☒ TA 1.1	☒ TA 1.2	☒ TA 2.1	☒ TA 3.1	☒ TA 4.1
☐ TA 4. n	☒ TA 5.1	☒ TA 5.2	☒ TA 7.1	☐ TA 8.1
☒ TA 9.1	☒ TA 9.2	☒ TA 10.1	☒ TA 13.1	☒ TA 13.2
☐ TA 14.1	☐ TA 15.1	☒ TA 16.1		

Issue Date

05th December 2023

Expiry Date

31st December 2024

Priya Suman

Ms. Priya Suman
Compliance Officer

Revision History of the document:

Revision	Summary of changes
2022[1]	Annual revision
Jan 2023	Annual revision and template change
Dec 2023	Change in the template due to revision in TA and function

CCIPL_FM 7.9 Certificate of Competency_V4.0_112023

[1] Please refer to previous version of FM 7.9 for the revision history

Carbon Check (India) Private Limited

Certificate of Competency

Ms. Indumathi C

has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

for the following functions and requirements:

☒ Validator	☒ Verifier	☒ Team Leader	☒ Technical Expert
☒ Technical Reviewer	☐ Health Expert	☐ Gender Expert	☒ Plastic Waste Expert
☐ CCB Expert	☐ Legal Expert	☒ Financial Expert	☐ Environmental, Health and Safety financial matters
☒ SDG+	☒ Social no-harm(S+)	☒ Environment no-harm(E+)	
☒ Local Expert for India and Sri Lanka			

in the following Technical Areas:

☒ TA 1.1	☒ TA 1.2	☐ TA 2.1	☒ TA 3.1	☐ TA 4.1
☐ TA 4. n	☐ TA 5.1	☐ TA 5.2	☐ TA 7.1	☐ TA 8.1
☐ TA 9.1	☐ TA 9.2	☐ TA 10.1	☒ TA 13.1	☒ TA 13.2
☐ TA 14.1	☐ TA 15.1	☐ TA 16.1		

Issue Date

5th December 2023

Expiry Date

31st December 2024

Priya Suman

Ms. Priya Suman
Compliance Officer

Sanjay Agarwalla

Mr. Sanjay Kumar Agarwalla
Technical Director

Revision History of the document:

Revision date	Summary of changes
2022[1]	Annual revision
Jan 2023	Annual revision
Dec 2023	Change in the template due to revision in TA and function

CCIPL_FM 7.9 Certificate of Competency_V4.0_112023

[1] Please refer to previous version of FM 7.9 for the revision history

APPENDIX 4: Findings Log

Table 1.CLs from this verification

CL ID	01	Section no.	MR	Date: 19/07/2024
Description of CL				
With respect to the SLS system it is not clear if any individual charging system has been disseminated during the current monitoring period. Moreover, the energy source and charging mechanism of individual charging systems is not clearly described in the MR i.e if it is centralised or decentralised. Additionally, PP is requested to share the technical specifications of SLS systems for further review.				
PP response				**Date:** 09/08/2024

During the monitoring period, two kinds of SLSs have been distributed: individual systems and systems with a central charging station (both these systems are battery charged LED or CFL based lighting system).

The primary distinction between them pertains to the charging provision. The individual systems have their own solar panels and battery charging station, while the systems with a central charging station have common charging station. For instance, the 'Light for Education' (LFE) systems include a centralized solar charging station, which charges multiple devices simultaneously.

The number of installations under LFE and non-LFE systems is presented below:

Year of Installation	# of LFE systems	# of non-LFE systems	Total
Prior to this monitoring period	**509**	**22,032**	**22,541**
During this monitoring period			
2019	-	-	-
2020	-	-	-
2021	1	3,947	3,948
2022	-	2,726	2,726
Total # of new systems installed during the monitoring period	**1**	**6,673**	**6,674**

Technical specifications of SLS system are being submitted.

Documentation provided by PP
VCS 1495 MP4 ER Calculator v3.0 09082024 VCS MR 1495 01012019-31122022 round 03_track SLS Technical specification
VVB assessment **Date:** 12/08/2024

PP has clarified that both individual systems and central charging systems are distributed during the current monitoring period. PP has specified the number of systems distributed during the monitoring period. VVB has cross-checked the reported values with the project database.

Further PP has clarified the charging mechanism of both the systems which is cross-checked by VVB through review of technical specifications provided. This is deemed acceptable to the verification team. Hence, this finding is closed.

CL ID	02	Section no.	4.2	Date: 19/07/2024

Description of CL	
According to the applied methodology AMS III. AR. Paragraph 30, "*While the percentage of project lamps that are operating and in service can be assumed to equal 100 per cent in year 1, 2, and 3, the result of ex post monitoring survey undertaken during the third year shall be used in years 4, 5, 6 and 7.*" In section 4.2, for the monitoring parameter $OF_{y,i,j}$, the value applied is 96% for years 4-5. However, the verification team has noted that few SHLS systems are operational beyond 5 years. PP is required to specify the value of operational factor applied beyond 5 years.	
PP response	**Date:** 09/08/2024
The monitoring report section 4.2, parameter table $OF_{y,i,j}$, refers to 4-5 years on account of typographical error. The value of 96%, established via ex-post monitoring surveys conducted during the third year (in previous issuance), is applicable as the usage rate of projects' SLS systems in years 4-7, in accordance with the applied methodology. Consequently, the typographical error in Section 4.2 of the MR regarding the monitoring parameter $OF_{y,i,j}$ has now been corrected.	
Documentation provided by PP	
VCS MR 1495 01012019-31122022 round 03_track	
VVB assessment	**Date:** 12/08/2024
PP has clarified that the error in reporting the system years. In the revised MR, PP has corrected the system years as 4-7. This is in line with the applied methodology and registered VCS PD. Hence, this finding is closed.	

CL ID	03	Section no.	ER sheet	Date: 19/07/2024
Description of CL				
In the tabs "SPV&SLS_Database" and "SWHS_Database", it is not clear what is the difference between the columns "Date" and "System Start Date". Further, it is not evident why the total number of installed systems as provided in section 3.1 of the MR has been calculated with respect to "Date" and not "System Start Date".				
PP response				**Date:** 09/08/2024
In the ER calculator, Tab 'SPV&SHLS_Database,' column 'AL' represents the sales date of the systems, while column 'AM' indicates the start date of the systems. As a conservative measure, the system's start date has been considered as the day following the sales date, and this is reflected in column 'AM.' Please refer to columns AN:AQ wherein the Product Year Fraction of the system has been calculated considering column AM (instead of column AL) conservatively. Same is applicable to the SWHS_Database. System start date has been considered only for emission reduction calculations as a conservative measure. For reporting the number of systems installed, the correct and rational date to be considered is the actual installation date. Hence, the information in section 3.1 of the MR is based on actual Date in column AL.				
Documentation provided by PP				
VCS 1495 MP4 ER Calculator v3.0 09082024				
VVB assessment				**Date:** 12/08/2024

PP has clarified the difference between 'system date' and 'system start date' in the ER sheet. VVB has noted that the 'system start date' is used for ER calculations and is the date on which the system started operating. However, for reporting the total number of systems installed, the actual installation date is considered. VVB has cross-checked the project database and confirms that the number of systems reported in MR are consistent with project database.

CL ID	04	Section no.	3.3	Date: 19/07/2024
Description of CL				
As per the applied methodology AMS I J, paragraph 10 (c) (iv), "*The appropriate value is multiplied by the aggregate collector area verified to have been installed by the project activity. This method is applicable only when all the following conditions are satisfied: ….(iv) The sizing calculations of the SWH systems are documented to be such that the average annual, daily amount of water heated by the SWH systems is less than or equal to the average annual, daily hot water demand for a typical installation.*" However, in section 3.3 of the MR, compliance to the above-mentioned condition is not demonstrated as it has only been, justified as "*Each installation is individually designed to ensure that needs are met*". PP is required to demonstrate compliance with above condition and provide evidence with respect to the same.				
PP response				Date: 09/08/2024
The Selco team visits each end user before installation to evaluate their hot water needs, consumption patterns, number of people in the household, quality of water available (hardness etc) and other requisite details. Based on these details captured and Selco's extensive professional experience and expertise, requisite sized solar water heaters are installed at a given beneficiary location, ensure that the amount of water heated by the project system but does not exceed the annual average, daily hot water demand. This was also validated during the registration and previous verifications by the VVBs. Thus, each SWHS installed under the project activity is fully compliant with para 10 (c)(iv) of AMS I.J.				
Documentation provided by PP				
VCS Final Validation Report-CCIPL 373				
VVB assessment				Date: 12/08/2024
VVB has reviewed the registered VCS PD to confirm that the justification provided by PP is in line with the methodology requirements. Further, VVB has also reviewed the validation report which states that *"A typical SWH system is designed to meet requirements for 3-18 people which represent typical small-scale demands. In addition, each SWH system contains an insulated storage tank (200 litres of volume) capable of retaining hot water for up to 48 hours. Thus, the installed SWH systems will be sufficient to meet the demands of the end users targeted under the project activity, which are small scale commercial and residential establishments."* Based on the above validated information, the VVB confirms that the technology is in compliance with the methodology requirement. Additionally, during the current monitoring period, VVB has interviews the end-users of SWHS units and confirmed that demands are sufficiently met, and the system specifications/system usage characters have not changed over the operational period. Thus, the clarification provided by PP is deemed acceptable to the verification team. Hence, this finding is closed.				

CL ID	05	Section no.	3.3	Date: 19/07/2024
Description of CL				

As per paragraph 18 (a) of the applied methodology AMS III AR, "*Project lamps are assumed to operate for up to seven years after distribution to end-users, and thus emission reductions can be claimed for up to seven years per project lamp, if all of the following conditions are met:* *(a) Unless specified otherwise in this document, the currently applicable requirements to meet the Lighting Global Minimum Quality Standards at the time of project application shall be met by project lamps based on IEC/TS 62257-9-5 and IEC 60529, or an equivalent national standard, or the approved norms indicated in paragraph 15(h);"* However, in section 3.3 of the MR, PP states that "*All products have been accepted under national standards*." PP is required to provide further clarification and provide evidence regarding the same.
PP response **Date:** 09/08/2024
The aforesaid requirement has been objectively assessed and validated during the registration and subsequent verifications already. As part of validation process, the VVBs opinion on compliance with paragraph 18(a) of the applied methodology AMS III AR has been already provided on page 47 & 48 of the validation report, version 5.0 dated 04/12/2015. Furthermore, item# /20/ and /B10/ as defined under Appendix 1.1 and Appendix 1.2 of the final validation report, refer to the applicable product specification test report by CPRI showing compliance against National standard/guideline. Lastly, since validation of the project, there has been no significant update to the national standards or guidelines related to the minimum quality requirement for lighting systems. Additionally, the manufacturers of the lighting systems used in the project have maintained standardized manufacturing processes since beginning. Thus, the SLS systems installed under the project are deemed in alignment with the national standards, as previously validated by the CCIPL team.
Documentation provided by PP
VCS Final Validation Report-CCIPL 373
VVB assessment **Date:** 12/08/2024
PP has clarified that compliance with the above requirement is demonstrated at the project validation. VVB has reviewed the validation report which states that *"After review of third-party test results the validation team concludes that all the project lamps follow the country specific national standards set out by the Ministry of New and Renewable Energy (MNRE), Government of India."* Further, during the on-site interviews, VVB confirmed that a standardized manufacturing process is followed by SLS system manufacturers. Based on the above information, VVB confirms that the project operation sufficiently complies with the methodology requirement, Hence, this finding is closed.

CL ID	06	**Section no.**	MR	**Date:** 19/07/2024
Description of CL				
It is not clear from the MR if PP has informed the manufacturers of the project systems (SHLS and SPV systems) and the implementation partner that the Verified Carbon Units (VCUs) may be issued for the greenhouse gas emission reductions and removals under this project and about the ownership of the VCUs to be issued for the grouped project activity. PP is required to provide evidence for the same.				
PP response				**Date:** 09/08/2024

It has been mutually agreed between the technology suppliers/manufacturers and the project proponent (Selco) that the ownership of the carbon credits arising from the use of the project systems shall lie with Selco. A declaration from the manufacturer/supplier regarding the credit ownership with SELCO is currently being submitted. Additionally, Selco, being the project implementer, has also informed the end users about the waiver of ownership of the carbon credits through a signed carbon waiver form included in the warranty card. A Sample carbon waiver form has already been submitted to the VVB team.
Documentation provided by PP
Carbon Credits transfer Declaration
VVB assessment **Date:** 12/08/2024
PP has provided a signed declaration from manufacturer of the SLS system which states that the manufacturer does not claim any ERs from this project activity. This evidence is deemed acceptable to the verification team. Hence, this finding is closed.

CL ID	07	**Section no.**	Project Database	**Date:** 19/07/2024
Description of CL				

Following voucher numbers are found to be repeated for SHLS systems across multiple end-users.

77/TI/SOL/13-14	28/TI/BEL/14-15
4/TI/GUL/14-15	22/TI/HVR/14-15
10/TI/HVR/14-15	36/TI/HVR/14-15
61/TI/HVR/14-15	53/TI/KAS/13-14
18/TI/RHR/13-14	15/TI/RHR/13-14
23/TI/RHR/13-14	16/TI/RHR/13-14
24/TI/RHR/13-14	17/TI/RHR/13-14
25/TI/RHR/13-14	8/TI/SOL/14-15
26/TI/RHR/13-14	9/TI/SOL/14-15
27/TI/RHR/13-14	77/TI/SOL/13-14
28/TI/RHR/13-14	85/TI/SOL/13-14
29/TI/RHR/13-14	86/TI/SOL/13-14
30/TI/RHR/13-14	53/TI/KAS/13-14
31/TI/RHR/13-14	16/TI/RHR/13-14
32/TI/RHR/13-14	17/TI/RHR/13-14
33/TI/RHR/13-14	18/TI/RHR/13-14
34/TI/RHR/13-14	19/TI/RHR/13-14
37/TI/RHR/13-14	31/TI/RHR/13-14
40/TI/RHR/13-14	32/TI/RHR/13-14
41/TI/RHR/13-14	42/TI/RHR/13-14
42/TI/RHR/13-14	19/TI/RHR/13-14
10/TI/SOL/14-15	13/TI/BEL/14-15
11/TI/SOL/14-15	85/TI/SOL/13-14
24/TI/RHR/13-14	86/TI/SOL/13-14
25/TI/RHR/13-14	55/TI/HVR/14-15
26/TI/RHR/13-14	56/TI/HVR/14-15
27/TI/RHR/13-14	57/TI/HVR/14-15
28/TI/RHR/13-14	58/TI/HVR/14-15
29/TI/RHR/13-14	59/TI/HVR/14-15
30/TI/RHR/13-14	60/TI/HVR/14-15
34/TI/RHR/13-14	
23/TI/RHR/13-14	
33/TI/RHR/13-14	
37/TI/RHR/13-14	
40/TI/RHR/13-14	
41/TI/RHR/13-14	
24/TI/HVR/14-15	
25/TI/HVR/14-15	
15/TI/RHR/13-14	

PP is requested to clarify regarding these voucher entries into the database and recheck the SPV and SHLS database.

PP response	**Date:** 09/08/2024

As per the requirements of the end users, there are instances where users purchase multiple systems at once, resulting in a single sale voucher for more than one project systems. However, the database reports these multiple systems as separate independent entries, thereby resulting in more than one entry corresponding to a single voucher number in the records. Remote selling location points, do not have a digital voucher generation system but use manual voucher books often. Thus, in certain cases voucher numbers are repeated although they pertain to sales made to different people, attributed to the voucher number serialization being re-set when an existing voucher entry book got exhausted. Having said that it is also worth noting that the occurrence of same voucher number is less than 5% of total population, which is less than material threshold. Also, in such cases, the serial number of system or the name and address of user serve as unique identifiers to avoid / eliminate any risks to double counting.
Documentation provided by PP
VVB assessment **Date:** 12/08/2024
PP has clarified the mechanism to ensure unique entries of the project devices. VVB has checked and confirmed that further duplicate entries with respect to any other data are not found in the database. Hence, this finding is closed.

CL ID	08	**Section no.**	ER sheet	**Date:** 19/07/2024
Description of CL				
In the tab 'SWH sample size calculation', PP has considered the population for MP vintage 01-Jan-2022 to 31-Dec-2022 as '14,252'. However, the verification team has noted that the project devices considered also include the devices installed in 2023. Further clarification is requested, since these devices are installed beyond the current MP.				
PP response				**Date:** 09/08/2024
In the previously submitted ER sheet, the sales vintage was incorrectly linked to the column "System start date," causing all sales made on December 31, 2022, to be recorded under 2023 sales (as explained in CL 03 above). The ER sheet has been revised, and the sales vintage have now been correctly linked to the sales date. Consequently, the population considered (14,252) by the project proponent in Tab 'SWH Sample Size Calculation,' Cell C17, is now correct and includes only the sales made till December 31, 2022.				
Documentation provided by PP				
VCS 1495 MP4 ER Calculator v3.0 09082024				
VVB assessment				**Date:** 12/08/2024
PP has clarified that, the discrepancy occurred due to incorrect linkage withing the ER sheet. PP has corrected the discrepancy in the revised ER sheet. This has been checked and confirmed by the verification team. Hence, this finding is closed.				

CL ID	09	**Section no.**	2.3.1	**Date:** 19/07/2024
Description of CAR				
In section 2.3.1 of the MR, PP is requested to clarify if there are any organisational policies in terms of ensuring no discrimination, sexual harassment, child labour, forced labour, human trafficking and ensuring gender equity. Please also provide evidence regarding the same.				
PP response				**Date:** 09/08/2024
Through its 'Child and vulnerable adult protection' and 'sexual harassment' policies, the PP ensures that there is no discrimination, sexual harassment, child labour, forced labour, or human trafficking, and that gender equity is upheld. The policy documents are being submitted for the reference.				

Documentation provided by PP	
HR Policy documents	
VVB assessment	**Date:** 12/08/2024
PP has clarified that 'Child and vulnerable adult protection' and 'sexual harassment' policies are in place ensuring no discrimination, sexual harassment, child labour, forced labour, human trafficking and ensuring gender equity. PP has updated section 2.3.1 of the MR to detail the policies. VVB has reviewed PP's HR policy documents to cross-check and confirm the same. Hence, this finding is closed.	

Table 2. CARs from this Verification

CAR ID	01	Section no.	4.4	Date: 19/07/2024
Description of CAR				
As per the VCS monitoring report template version 4.4, "*Use the following format for the file name of the completed document: VCS MR Project ID DDMMMYYYY-DDMMMYYYY 'DDMMMYYYY-DDMMMYYYY' should be the start and end dates of the monitoring period. If revised documents are submitted, add '_round#_track' or '_round#_clean' to indicate the review round (1-3) and if it is the clean or track changes version of the document.*" Kindly review and revise in this regard. Please also adhere to other formatting requirements as mentioned in the first page of the template.				
PP response				**Date:** 09/08/2024
The format has been revised to align with the requirements specified in the VCS Monitoring Report Template, Version 4.4. The same has been reflected in the file name of the document.				
Documentation provided by PP				
VCS MR 1495 01012019-31122022 round 03_track				
VVB assessment				**Date:** 12/08/2024
VVB has reviewed the updated MR and confirms that PP has made the required corrections as per the template. Hence, this finding is closed.				

CAR ID	02	Section no.	1.1	Date: 19/07/2024
Description of CAR				
As per the MR template 4.4, section 1.1 must include "*A summary description of the implementation status of the technologies/measures (e.g., plant, equipment, process, or management or conservation measure) included in the project, including relevant implementation dates (e.g., dates of construction, commissioning, and continued operation periods).*" However, these details have not been mentioned in section 1.1 of the MR.				
PP response				**Date:** 09/08/2024
The project involves progressive distribution of products during the monitoring period based on the product demand. Section 1.1 of the MR has been updated to reflect the implementation status, including the year-by-year cumulative number of lighting systems, SWHS and SPVs distributed. All systems installed, are deemed under continuous operation since their installation date. Additionally, the project monitors project systems' drop off rate on a sampling basis, accounting emission reductions, only for project population that is deemed operational.				
Documentation provided by PP				
VCS MR 1495 01012019-31122022 round 03_track				
VVB assessment				**Date:** 12/08/2024
VVB has reviewed the updated MR and confirms that PP has updated section 1.1 of the MR to describe the implementation status. Hence, this finding is closed.				

CAR ID	03	Section no.	1.9	Date: 19/07/2024
Description of CAR				
As per the VCS MR template 4.4, in section 1.9 "*Provide the following information for the methodology(s), tools, and modules applied to the project (where applicable).*" However, in section 1.9 of the MR, PP has not specified the tools utilized.				
PP response				**Date:** 09/08/2024
As per the registered PD, Tool 21, Tool 7 has been utilized in Project. Section 1.9 of the MR has been updated to include these tools and their version details, in accordance with the VCS MR Template 4.4.				
Documentation provided by PP				
VCS MR 1495 01012019-31122022 round 03_track				
VVB assessment				**Date:** 12/08/2024
VVB has reviewed the updated MR and confirms that PP has specified the applied tools. Hence, this finding is closed.				

CAR ID	04	Section no.	3.3	Date: 19/07/2024
Description of CAR				
Condition 7(b) of the methodology AMS-III.AR states that "*Daily Burn Time (DBT) shall meet the following requirements: (i) DBT shall be equal to or greater than 4 hours; For charging Option 3(a) with solar PV, the DBT is defined by the Solar Run Time for the project lamp (as determined per paragraph 9(g))*" However, in the corresponding justification provided by PP it is only mentioned that "*the typical system is designed for at least 4 hours use per day.*" PP is required to provide further clarification with respect to compliance with above condition. Additionally, in the same table, the justification for condition 2(b) has been provided as follows: "*This grouped project will involve new construction projects. The UNEP-sponsored study referenced above shows that electric water heating systems are being displaced.*" However, no such UNEP study has been found referenced above.				
PP response				**Date:** 09/08/2024
Please refer to Page 16 of the registered VCS PD, wherein the compliance with condition 7(b) of the applied methodology, AMS – III. AR. has been demonstrated. Further refer to appendix 1 of the PD wherein the DBT of each type of SLS system has been established as >=4 hrs per day already, thus demonstrating compliance with the methodological requirement. The same has been added in the revised MR under section 3.3. Additionally, the UNEP study that has been referred for justifying the compliance with condition 2(b) of the applied methodology AMS-I. J is now added in the revised MR. Please refer to footnote 15 and 16 for the weblink of the UNEP study.				
Documentation provided by PP				
VCS MR 1495 01012019-31122022 round 03_track Selco PD 20151203 (VCS Project Description Template, v3.2_0) to DOE-v1.4				
VVB assessment				**Date:** 12/08/2024
VVB has reviewed the updated MR and confirms that in section 3.3, PP has justified DBT of each type of SLS system as >=4 hrs per day. Additionally, the referenced UNEP study is included in the revised MR. Hence, this finding is closed.				

CAR ID	05	Section no.	4.2	Date: 19/07/2024
Description of CAR				
In section 4.2, for the parameter Ni,j, the value mentioned in the column 'value monitored' is inconsistent with the values mentioned in section 3.1 of the MR. Year wise distribution values have also not been provided in section 4.2. Similarly for parameter A_k, as well, year wise values under the column "values monitored" have not been provided.				
PP response				**Date:** 09/08/2024
Previously, due to a typographical error, the total number of end-user rows in the database was incorrectly reported in Section 3.1 of the MR instead of the sum of the total SLS systems distributed. This has now been corrected, and Section 3.1 of the MR has been updated to reflect the accurate total number of SLS systems, which is now consistent with parameter $N_{i,j}$ in Section 4.2. Additionally, the year-wise distribution data have now been added to parameter $N_{i,j}$ of Section 4.2. Similarly for parameter A_k under section 4.2, year wise values under "values monitored" have now been updated.				
Documentation provided by PP				
VCS MR 1495 01012019-31122022 round 03_track				
VVB assessment				**Date:** 12/08/2024
VVB has reviewed the updated MR and confirms that section 3.1 of the MR is updated to specify the total number of SLS systems. PP has also specified the year-wise distribution for the parameters Ni,j and Ak in Section 4.2. VVB has cross-checked the reported values with the project database and deemed accurate. Hence, this finding is closed.				

CAR ID	06	Section no.	4.3	Date: 19/07/2024
Description of CAR				
As per the MR template version 4.4, section 4.3 Monitoring plan must contain the following information: • *The implementation of sampling approaches, including target precision levels, sample sizes, sample site locations, stratification, frequency of measurement and QA/QC procedures. Where applicable, demonstrate whether the required confidence level or precision has been met.* However, the same has not been mentioned in section 4.3 of the MR. Additionally, PP has not specified the actual sample size along with confidence and precision level that was eventually applied during the current monitoring period in the MR.				
PP response				**Date:** 09/08/2024

For SWH systems, the operational factor was monitored annually. The monitoring period from 01 January 2019 to 31 December 2022, consists of four annual monitoring sessions, with monitoring of the SWH operational factor conducted. Due to the large number of products distributed, it is not economically feasible to monitor each individual SWHS. The target population / sampling frame included the total cumulative number of Solar Water Heating (SWH) systems installed in the project in each monitoring year (i.e. 2019, 2020, 2021 and 2022). Annual Sampling approach based on simple random sampling with a 90/10, confidence/precision ratio was applied for each monitoring session. The sample sizes were determined in accordance with 'Guideline: Sampling and Surveys for CDM Project Activities and Programmes of Activities', and 'Standard: Sampling and Surveys for CDM Project Activities and Programmes of Activities' and registered monitoring and sampling plan, as described in the VCS-PD. The estimated proportion values for determining the sample size were considered by the PP based on its professional experience and expertise. Although the requisite samples sizes were fairly small, the PP identified 120 samples for each monitoring year to determine the SWHS usage rate effectively and credibly. For sample selection, the SWHS population in the installation database was arranged chronologically and assigned unique sampling serial numbers from 1 up to the total number of units in the database. 120 random numbers were then generated online using the StatTrek random number generator. Subsequently, the SWHS corresponding to the random number generated online were selected for monitoring. This ensured that each entry in the end user database had an equal chance of selection, thereby maintaining unbiased sampling. Also, to account of seasonality, the 120 identified systems were monitored across the entire year (@ average 10 samples per month, in general). This ensured that the usage rate determined was representative of the project population as well as usage pattern across the entire monitoring year. As a QA/QC procedure, lower bound confidence interval values have been applied for cases where desired precision has not been met. Section 4.3 of the MR has been updated to include the implementation of sampling approaches, target precision levels, sample sizes, sample site locations, frequency of measurement, and QA/QC procedures etc. It has also been demonstrated that the required precision level has been met in the final monitoring data.
Documentation provided by PP
VCS MR 1495 01012019-31122022 round 03_track VCS 1495 MP4 ER Calculator v3.0 09082024 Random sampling documents
VVB assessment — **Date:** 12/08/2024
VVB has reviewed the updated MR and confirms that section 4.3 is updated to outline the sampling approach followed during the monitoring period. Additionally, PP has demonstrated that the minimum required precision level is met. Hence, this finding is closed.

CAR ID	07	**Section no.**	3.3	**Date:** 19/07/2024
Description of CAR				

As per para 18 (b) of the applied methodology AMS III AR version, version 5.0: *"Project lamps are assumed to operate for up to seven years after distribution to end-users, and thus emission reductions can be claimed for up to seven years per project lamp, if all of the following conditions are met:* *(b) At a minimum, project lamps must be certified by their manufacturer to have a useful operational life of 10,000 hours. Within this time span, the relative luminous flux shall not decrease by more than 30 per cent as per equation (1). Such claims shall be confirmed by a third-party testing organization using an applicable standard and testing protocol. As an alternative to long-term measurement of light output over the full lifetime of the lamp, a shortened measurement period of 2,000 hours may be chosen. If a 2,000 hour test period is used, the relative luminous flux shall not decrease by more than 15 per cent during the 2,000 hours of continuous operation. If the average life value is not available ex ante, it shall be made available for verification."* However, in section 3.3 of the MR it is only mentioned that the project lamps meet or exceed the minimum performance characteristics according to third-party test results. Additionally, these third-party results have also not been provided as evidence.
PP response **Date:** 09/08/2024
For the criteria 18(b) of the applied methodology AMS III AR, please refer to the corresponding justification provided in section 3.3 of the MR: "The rated average life is certified by the manufacturers. For CFLs (Osram), the life is at least 15,000 hours, and for LEDs (CREE), it is at least 35,000 hours". For product characteristics, including the rated lamp life, which is greater than 10,000 hours, please refer to Appendix 1 of the registered PD. As part of validation / registration process, compliance against paragraph 18(b) of the applied methodology AMS III AR has been already validated and approved. Please refer to page 48 & 49 of the validation report, version 5.0 dated 04/12/2015 wherein the same has been objectively reported by the VVB. Furthermore, item#/19/, /20/ and /B10/under Appendix 1.1 and Appendix 1.2 of the final validation report confirms that the technical specifications issued by manufacturers, product specification test report by CPRI and National standard/guideline were reviewed by the VVB to validate the project devices' compliance with the methodological requirement. Given the project includes products manufactured under strict quality control and standardized production process hence no change in performance characteristics is envisaged across the entire crediting period. Additionally, technical specification of SLS is being submitted for average life confirmation. As per the same, each type of CFL/LED exceeds the minimum performance characteristics with having a rated average lifetime of >10,000 hours.
Documentation provided by PP
VCS Final Validation Report-CCIPL 373 SLS Technical specification
VVB assessment **Date:** 12/08/2024
VVB has cross-checked the registered PD and corresponding validation report and confirms that PP has sufficiently justified the lifespan of the project device. Additionally, VVB has reviewed the manufacturing process followed by PP and confirms that minimum performance level is met by the project devices. Hence, this finding is closed.

CAR ID	08	**Section no.**	2.1.2	**Date:** 19/07/2024
Description of CAR				

As per the VCS MR Template version 4.4, in section 2.1.2, in the table for Stakeholder Consultation and Ongoing Communication, under the column Ongoing Consultation, the following is required to be stated: *"Describe how the project proponent took all appropriate measures to communicate and consult with stakeholders during the monitoring period in line with the validated plan for ongoing communication."* Similarly, for the other columns in the table following are the template requirements: *"Communication of monitored results: Describe how the monitoring results were communicated and demonstrate that the results were provided in a timely manner."* *"Consultation records: Describe the process or methods used to document the outcomes of the stakeholder consultation."* *"Stakeholder input: Describe how due account was taken of all input received during the consultation. Include details on any updates to the project design or justify why updates were not necessary or appropriate."* However, in the MR, PP has only provided reference to section 6 of the PD which is inadequate.
PP response **Date:** 09/08/2024
SELCO maintains a comprehensive 'ongoing communication' process via the Grievance mechanism. The project beneficiaries and other stakeholders are informed about the grievance mechanism, which includes customer care contact details, grievance register maintained at the local office locations of the project proponent (PP) and web-based grievances raising process. Local employees, including field staff and resource persons, also serve as a medium to receive and escalate grievances received from the project beneficiaries in their respective areas to SELCO management. All grievances received are recorded in Selco's digital grievance register, and Selco grievance / management team takes appropriate actions to address and resolve each customer's concern, on their merit. The feedback received via the grievance process has been reported in section 2.1.4 of the revised MR. In general, stakeholders are highly appreciative of the initiative taken by Selco and welcome the solar project. They acknowledge the project's benefits, including the promotion of renewable energy, GHG avoidance, the Light for Education program, and employment generation. No negative comments regarding the project design have been raised during the ongoing consultation, and therefore, no changes to the project design have been necessary. The monitoring results of the monitoring years 2019-2022 have been published on the PP's website. Documents related to communication of monitored results and grievances mechanism is being submitted. Section 2.1.2, of the MR has been updated in line with Selco's current continuous stakeholder consultation and ongoing communication mechanism. Section 2.1.4, of the MR has been updated to report how due account is taken on the grievances received. No change in the project design is deemed required on account of grievance received during the monitoring period.
Documentation provided by PP
VCS MR 1495 01012019-31122022 round 03_track Grievance documents
VVB assessment **Date:** 12/08/2024
VVB has reviewed the updated MR and confirms that PP has revised section 2.1.2 as per the template filling guideline to outline the on-going communication mechanism. Hence, this finding is closed.

CAR ID	09	**Section no.**	2.1.4	**Date:** 19/07/2024
Description of CAR				
During onsite visit VVB has noted that grievances from end uses were recorded in a grievance register during the current monitoring period, which was received through toll free numbers provided by PP to all stakeholders. However, details of the same have not been adequately provided in section 2.1.4 of the MR.				

PP response	Date: 09/08/2024
PP has a robust grievance mechanism system, allowing customers to contact the Selco team through a toll-free number, local offices, or field teams. All grievances received are recorded in Selco's digital grievance register, and the Selco team takes appropriate actions to address and resolve each customer's concern. Grievances received during the monitoring period, along with their resolutions and outcomes, have now been updated in Section 2.1.4 of the MR. All grievances received during the monitoring period have been appropriately resolved by the Selco team, and the customers were fully satisfied with Selco's responses. Document related to grievances is being submitted.	
Documentation provided by PP	
VCS MR 1495 01012019-31122022 round 03_track Grievance documents	
VVB assessment	**Date:** 12/08/2024
VVB has reviewed the updated MR and confirms that PP has revised section 2.1.4 to report the grievances received during the current MP as well as their redressal. Hence, this finding is closed.	