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Gold Standard for Global Goals Verification Report

**GOLD STANDARD VERIFICATION OF
GS PROJECT NO. (GS-7080)
72 MWac Ramnad Solar Power Project by
Ramnad Solar Power Limited (RSPL) at
Tamil Nadu**


Report No. 10851SK

10 June 2022

TÜV SÜD South Asia Pvt. Ltd.
Solitaire, I.T.I. Road, Aundh
Pune- 411007
INDIA



South Asia

Title of the project activity	72 MWac Ramnad Solar Power Project by Ramnad Solar Power Limited (RSPL) at Tamil Nadu											
GS Reference number of the project activity	GS 7080											
Version number of the verification and certification report	6.0											
Completion date of the verification and certification report	07/06/2022											
Monitoring period number and duration of this monitoring period	26/10/2018 to 31/12/2020 (both days included)											
Version number of monitoring report to which this report applies	05											
Crediting period of the project activity corresponding to this monitoring period	26/10/2018 to 25/10/2023											
Project participant(s)	Ramnad Solar Power Limited											
Host Party	India											
Sectoral scope(s)	1											
Methodology (ies)	ACM0002 "Grid-connected electricity generation from renewable sources" Version 20.0											
Estimated amount of annual average certified SDG impact (as per approved PDD)	110,317tCO ₂ e											
Certified GHG emission reductions or net anthropogenic GHG removals for this monitoring period	246,366 tCO ₂ e <table border="1" data-bbox="805 1473 1374 1688"> <thead> <tr> <th>Year</th> <th>Emission Reductions (tCO₂)</th> </tr> </thead> <tbody> <tr> <td>2018</td> <td>18,188</td> </tr> <tr> <td>2019</td> <td>118,822</td> </tr> <tr> <td>2020</td> <td>109,356</td> </tr> <tr> <td>Total</td> <td>246,366</td> </tr> </tbody> </table>		Year	Emission Reductions (tCO ₂)	2018	18,188	2019	118,822	2020	109,356	Total	246,366
Year	Emission Reductions (tCO ₂)											
2018	18,188											
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Total	246,366											
Name of DOE	TUV SUD South Asia Pvt Ltd (E-0005)											
Name, position and signature of the approver of the verification and certification report	 Eswar Murty, Sr. Manager Certification Body, TUV SUD South Asia Pvt Ltd											



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Annex 1: List of findings

Annex 2: Information Reference List

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1 METHODOLOGY

1.1 Objective

TÜV SÜD has been commissioned by the aforementioned client to perform an independent verification assessment.

The objective of the verification work is to comply with the requirements of Gold Standard requirements. According to this assessment TÜV SÜD shall:

- ensure that the project activity has been implemented and operated as per the registered PDD, and that all physical features (technology, project equipment, monitoring and metering equipment) of the project are in place,
- ensure that the published MR and other supporting documents provided are complete, verifiable and in accordance with applicable GS4GG and CDM requirements,
- ensure that the actual monitoring systems and procedures comply with the monitoring systems and procedures described in the monitoring plan and the approved methodology,
- evaluate the data recorded and stored as per the applicable requirements.
- assessment of the sustainability monitoring parameters as per the GS requirements.

1.2 Scope

The scope of any assessment is defined by the underlying legislation, regulation and guidance given by relevant entities or authorities. In the case of GS project activities, the scope is set by:

- GS 4 GG requirements
- Clean Development Mechanism Validation And Verification Standard (VVS) for Project Activities v2.0
- Baselines and monitoring methodologies (including GHG inventories)
- Environmental issues relevant to the applicable sectoral scope
- Applicable environmental and social impacts and aspects of GS project activity
- Current technical and operational knowledge of the specific sectoral scope and information on best practice
- Stakeholder consultation and feedback

The verification process is not meant to provide any form of consulting for the project participant (PP). However, stated requests for clarifications, corrective actions, and/or forward actions may provide input for improvement of the project design.

Once TÜV SÜD receives the MR, it is made available on the GS Registry through a dedicated interface on the Gold standard website. The Verification shall commence only after the project documents are listed on the registry.

1.3 Verification Process

The information provided by the project participants is assessed by applying the means of verification specified in the GS4GG, Toolkit and the VVS.

A competent assessment team is selected prior to the start of the verification. The team is selected to cover the technical area(s), sectoral scope(s) and relevant host country experience for evaluating the



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GS project activity. Additionally, a competent Technical Reviewer or Technical Reviewer Team is appointed to conduct checks on quality and completeness.

The verification team performs first a desk review, followed by an on-site visit, which results in the formation of a draft report and a list of findings. The next step involves the evaluation of the findings through direct communication with the PPs and then finally the preparation of the verification report. This verification report and other supporting documents then undergo an internal quality control by the CB “Environment and energy” before submission to the GS.

1.4 Appointment of the Team

According to the technical scopes and experiences in the sectoral or national business environment, TÜV SÜD has composed an assessment team in accordance with the appointment rules of the TÜV SÜD Certification Body “Environment and Energy”.

The composition of an assessment team has to be approved by the Certification Body (CB) to assure that the required skills are covered by the team. The CB of TÜV SÜD operates the following qualification levels for team members that are assigned by formal appointment rules:

- Assessment Team Leader (ATL);
- Verifier (V);
- Verifier Trainee (T);
- Technical Experts (TE);
- Country expert (CE);
- Technical reviewer (TR).

It is required that the sectoral scope(s) and the technical area(s) (TA) linked to the methodology/ies and project has to be covered by the assessment team. Appointment certificates of the selected team members are attached to this report as Annex.

Verification team member

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk review	On-site inspection	Interview(s)	Verification findings
1.	Team Leader, Verifier & Technical Expert	EI	Kewat	Shailendra	TUV SUD South Asia	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Technical reviewer and approver of the verification and certification report

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer	IR	Murty	Eswar	TUV SUD South Asia
2.	Approver	IR	Murty	Eswar	TUV SUD South Asia

1.5 Review of Documents

The Monitoring Report version 01 was submitted to DOE before the verification activities started. The MR was assessed based on all the relevant documents. The aim of the assessment in the desk review was to:

- verify the completeness of the data and the information presented in the MR.
- check the compliance of the MR with respect to the monitoring plan depicted in the registered PDD and verify that the applied methodology was carried out. Particular attention to the frequency of measurements, the quality of the metering equipment including calibration requirements, and the quality assurance and quality control procedures was paid,
- evaluate the data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.

A complete list of all documents reviewed is available in the Information Reference List attached as Annex 2 to this report.

1.6 On-site Assessment and follow-up Interviews

A site inspection was carried out to check the project design and confirm that the project is implemented and operated as described in the PD. The project site visit was inspected on 02/08/2021. Which is in accordance to paragraph 3.2.2 of Site Visit and Remote Audit Requirements and Procedures – V1.0 ‘A physical site visit by VVB is mandatory at the first verification of a project.’

Also, as per paragraph 3.1.1 of Site Visit and Remote Audit Requirements and Procedures – V1.0 “At minimum, the VVB shall conduct physical site visit Within two years of project start date”. The start date of the project activity is 13/06/2015 as per the date of earliest purchase order by Ramnad Solar Power Limited for supply of Balance of System. The plant was commissioned on 08/02/2016 as part of validation a site visit was done on 25/05/2019.

During the site visit a discussion on implementation and operation of the project and operation was conducted by studying related documents at project site. Also, relevant monitoring procedures were checked, environmental impacts of the project activity was conducted as well.

To physically verify the compliance of project installation with the methodology, relevant tools and the GS standard requirements, the verification team at project site, accompanied by representatives of PP.

In addition to physical checks, the verification team interviewed the PP and it was confirmed that the project is greenfield renewable energy project. Thus, the baseline scenario is in compliance with the requirements of the methodology.



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Duration of Audit & Interviews:				
No.	Activity performed on-site	Site location	Date	Team member
1.	During the site assessment of the project TUV SUD team has assessed the implementation and operation of the project activity, reviewed the information flows for generating, aggregating and reporting the monitoring parameters, interviewed key personnel of the project.	Tamilnadu	02/08/2021	Shailendra Kewat

Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1	-	Sankaranarayanan	Site-In-charge	02/08/2021	Monitoring and project implementation and SDG parameters	Shailendra Kewat
2	-	Raman	Engineer	02/08/2021	Monitoring and project implementation	Shailendra Kewat
3	-	Saurab	Technician	02/08/2021	Monitoring and project implementation	Shailendra Kewat
4	Gurhosur	Shraddha	Consultant	02/08/2021	Monitoring, sampling, project implementation and ER calculations	Shailendra Kewat

Apart from them the following stakeholders were interviewed :

No negative comment has been received

Interviewed Personnel	Functions	Organization	Subject
Hamza	Local stakeholder	Villager	General aspects of the project, Quality management system, Environmental and social issues, Projects contribution to sustainable development, grievance mechanism
Chandra	Local stakeholder	Villager	
Mouli	Local stakeholder	Villager	
Merra	Local stakeholder	Villager	
Rajan	Local stakeholder	Villager	
Madhav	Local stakeholder	Villager	
Arjuna	Local stakeholder	Villager	
Shamir	Local stakeholder	Villager	

1.7 Resolution of Clarification and Corrective and Forward Action Requests

The objective of this phase of the verification is to resolve the requests for corrective actions, clarifications, and any other outstanding issues which need to be clarified for TÜV SÜD's conclusion on the achieved emission reductions. Two CARs, four CL and no FARs were raised during the course of verification. All the CARs and CRs raised by TÜV SÜD are resolved during communication between the client and TÜV SÜD. To guarantee the transparency of the verification process, the concerns raised and responses that have been given are documented in detail in the List of Findings that is attached as Annex 1 to this report.

1.8 Internal Quality Control

Internal quality control within the team is assured by means of a technical review process that takes place after the on-site assessment and after closure of findings. The internal quality control in the verification process is given by the final decision (Verification and Certification Conclusion) made by the CB "Environment and Energy".

2 CARBON VERIFICATION AND REPORTING

In the following sections, the results of the verification are stated. The verification results relate to the project performance as documented and described in the final PDD and final Monitoring Report. The verification findings for each verification subject are presented below.

2.1 FARs from Validation / Previous Verification

No FARs envisaged from previous verification. This is first periodic verification for the project activity.

The following FAR was raised during design review which is resolved as mentioned below

FAR # 1: The VVB shall confirm that the credits are not being claimed for the same GHG emission reduction under the GS and the CDM.

The Declaration for No-Double counting has been submitted to the VVB mentioning that the "The project activity has not applied for any other certification like Green or White certification" Also, VVB confirm avoidance of double-counting by reviewing all relevant registries (domestic and international e.g., REC/I-REC, etc) that could hold REACs from the project activity.

The following FARs were raised during transition review which were resolved as follows:

FAR # 1: In-line with GS4GG Principles and Requirements, VVB and PP shall consider the following rules after the Transition is finalized:

- a) 5.1.39: Transparent, annual update reports need to be provided for Projects that have achieved the Project Design Certification stage or have successfully transitioned to Gold Standard for the Global Goals. An annual report shall be submitted for each monitoring year by end of next calendar year for which verification is not completed. If a verification is in progress but not completed, then an Annual Report is still required by the end of calendar year.

For the project the chronology of dates is as follows:

CDM registration date : 04/08/2020

Design certificate date : 26/10/2020

Date of final document submission for performance review : 20/09/2021
Transition date :16/03/2022

According to the rules PP must have submitted the annual report by 31/12/2021. However the deadline was missed as the team has not competent enough to understand terminologies used in the Carbon mechanisms. The lack of information for GS4GG certification is the main reason. Also the verification was expected to complete in 2021 however as the team is new payment process to sustainCert took lot of time and the performance review was shifted to 2022. Along with that transition was also ongoing. A deviation regarding the same has been submitted.

- b) 5.1.50: Transitioning projects, maintaining their existing crediting cycle shall undergo Performance Certification no later than the first two years after project implementation or design certification, whichever is later, and once every three years after that, unless the Verifier provides a convincing case for less frequent visits as part of the Verification Report.

For this monitoring period which is within two years after design certification, site visit has been done hence, this FAR has been resolved

FAR # 2: In line with the relevant requirement, project developer shall make a declaration, in writing, in the monitoring report to state that the project developer will not issue both a CER and a Gold Standard VER for the same vintage from a project that is registered with Gold Standard.

Response : The MR has been revised stating the declaration "The project developer will not issue both a CER and a Gold Standard VER for the same vintage from a project that is registered with Gold Standard." In section A.4 of the Monitoring report.

FAR # 3: The actual SDG contributions shall be checked during the next Performance Certification stage.

Response : In this performance review the SDG contributions has been check and found to be inline with the PDD

2.2 Project Implementation in accordance with the registered PDD

The project activity involves the installation of 72 MWAC (corresponding to 86.40 MWp) solar power project. In the same project boundary the project is installed at Village called O. Karisalkulam, Tehsil: Kamuthi, District: Ramanthpuram, State: Tamil Nadu.

From the project activity, the electricity generated is sold under the Power Purchase Agreement (PPA), signed with Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO) which is completely owned by the Government of Tamil Nadu. For the consumption in the Indian Electricity Grid the electricity produced from the project activity is be evacuated through 110 kV sub-station located at Kamuthi.

The Project is located at a village named O. Karisalkulam, Tehsil: Kamuthi, District: Ramanthpuram, State: Tamil Nadu. The site is well connected by state highway (SH) 47 up to Arruppukottai and further national highway NH48 connects to Madurai. The project coordinates are 9°19'26.90"N and 78°23'40.62"E.

The crediting period is 26/10/2018 to 25/10/2023. The monitoring period for this verification is 26/10/2018 to 31/12/2020. The start date of crediting period is 26/10/2018 which is found appropriate as the design certification date is 26/10/2020 the 10.2.1 of GHG Emissions Reduction & Sequestration Product Requirements v.2.1 states that “The start date of Crediting Period is the date of start of operation (start of planting for A/R Projects) or a maximum of two years (three years for A/R & AGR) prior to the date of Project Design Certification, whichever occurs later.”

With the installation of PV the total installed capacity of 72 MWac (corresponding to 86.4MWp) the project activity aims to harness solar energy. The solar PV power plant has solar PV modules, inverters, transformers and other protection system and supporting components.

2.3 Sampling Approach

PP did not apply sampling plan to determine data and parameters monitored during this monitoring period. The verification team has checked all the documents such as JMR issued by State electricity board /Invoices etc. and hence sampling plan was not required. The verification team hereby confirms that has checked all the documents

2.4 CLs, CARs and FARs raised

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
Compliance of the monitoring report with the monitoring report form			
Compliance of the project implementation with the registered PDD	1		
Post-registration changes			
Compliance of the monitoring plan with the monitoring methodology including applicable tool and standardized baseline	2		
Compliance of monitoring activities with the registered monitoring plan			
Compliance with the calibration frequency requirements for measuring instruments			
Assessment of data and calculation of emission reductions or net removals		1	
Others (Assessment of SDG outcomes)	1	1	
Total	4	2	0

2.5 Compliance of the Monitoring Plan with the Methodology

During the document review and furthermore during the site visit, the verification team has reviewed the registered monitoring plan and compared it with the monitoring methodology to verify their compliance. The verification team confirmed that the implemented monitoring plan is in compliance with the registered PDD and the monitoring methodology as well.

2.6 Compliance of the Monitoring with the Monitoring Plan

The monitoring has been carried out in accordance with the monitoring plan contained in the registered PDD. All parameters were monitored and determined as per the Monitoring Plan.

The verification of the parameters required by the monitoring plan is provided as follows:



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The monitoring has been carried out in accordance with the monitoring plan contained in the registered PDD. All parameters were monitored and determined as per the Monitoring Plan.

The verification of the parameters required by the monitoring plan is provided as follows

Data / Parameter:	EG PJ, y																												
Data unit:	MWh																												
Description:	Quantity of net electricity supplied to the grid																												
Source of data used:	<p>The electricity exported to the grid by the project activity connected to the sub- station is measured by electronic trivector meters of accuracy class 0.2s. The electricity exported is measured continuously using Main & Check meters. Generation statement is provided by TANGEDCO every month.</p> <p>There are 3 Energy meters (1 main meter, 1 check meter, 1 standby meter) sealed and under control of TANGEDCO used for joint metering installed at interconnection point of the Grid at project site.</p> <table border="1"> <thead> <tr> <th colspan="4">Meter & Calibration Details:</th> </tr> <tr> <th>Details</th> <th>Main Meter</th> <th>Check Meter</th> <th>Standby meter</th> </tr> </thead> <tbody> <tr> <td>Meter Number</td> <td>TNW01979</td> <td>TNW01987</td> <td>TNE81539</td> </tr> <tr> <td>Make</td> <td>Secure</td> <td>Secure</td> <td>Secure</td> </tr> <tr> <td>Accuracy</td> <td>0.2s</td> <td>0.2s</td> <td>0.2s</td> </tr> <tr> <td>Last Calibration</td> <td>20/07/2018</td> <td>27/08/2018</td> <td>27/08/2018</td> </tr> <tr> <td>Calibration frequency</td> <td colspan="3">Once in 5 years as per CEA guidelines</td> </tr> </tbody> </table> <p>The meter test/calibration for the meters installed in the project activity has been calibrated by third party entity (measurmatic India) in the presence of DISCOM officers .The meters are calibrated according to CEA guidelines hence, are found well calibrated for this monitoring period. Which has been cross checked through the calibration certificates and also confirmed at the site visit</p>	Meter & Calibration Details:				Details	Main Meter	Check Meter	Standby meter	Meter Number	TNW01979	TNW01987	TNE81539	Make	Secure	Secure	Secure	Accuracy	0.2s	0.2s	0.2s	Last Calibration	20/07/2018	27/08/2018	27/08/2018	Calibration frequency	Once in 5 years as per CEA guidelines		
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Last Calibration	20/07/2018	27/08/2018	27/08/2018																										
Calibration frequency	Once in 5 years as per CEA guidelines																												
Means of verification/Comments:	<p>VVB has verified the JMR issued by the TANGEDCO for the each month and found the generation data in line with the ER sheet. This value has been cross-checked with the invoice raised by PP</p> <p>The JMR is basically a statement showing energy generated by the project for a particular month. The export represents the energy generated by the project activity and import represents the energy consumed by the project activity. The net generation is calculated as a difference between export and import .</p> <p>The electricity exported and imported to the grid by the project activity connected to the substation is measured by electronic trivector meters of accuracy class 0.2s using Main & Checkmeters. Export and import readings of Main & Checkmeters is taken on monthly basis by authorized officer of TANGEDCO in the presence of PP or representative of PP. The calculation is done by Tamil Nadu Generation and Distribution</p>																												



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	Corporation Limited (TANGEDCO) and the PP has no say in the calculation. Based on the Monthly generation Statement issued by TANGEDCO, the project shall raise the invoice.
Cross-check	Quantity of net electricity supplied to the grid is e cross-checked from the Invoices/ Monthly Bill raised by the Project Participant to Ramnad Electricity Distribution Circle, TANGEDCO.

Data / Parameter:	Emission reductions
Data unit:	tCO2
Description:	Reduction in CO2 emission reduction due to implementation of project activity
Source of data used:	Calculated as per registered PDD
Means of verification/Comments:	Emission reduction calculated in line with applied methodology and PDD V04. ER calculation checked in ER spread sheet and found to be correct and conservative.
Cross-check	A check meter is also installed near to the export meter to cross check the electricity exported to the grid. The check meter reading would also be used in case of failure of export meter

Data / Parameter:	Quality of employment
Data unit:	Number (employees)
Description:	Number of project employees with Number of male/female, permanent/temporary, age and person with disabilities.
Source of data used:	Training Records (HSE & HR) & Employee feedback forms Salary Slip of the project employees.
Means of verification/Comments:	HR records and salary slip has been verified and found PP has employed 11 employees for this monitoring period. Also, PP has confirmed that total 13 trainings have been provided to their employees during current monitoring period.
Cross-check	DOE has corss verified the training records submitted by PP

Data / Parameter:	Quantitative employment and income generation
Data unit:	Number (training) INR (Salary)
Description:	Number of Trainings provided to employees & O&M staff Salary given to the employees of the project.
Source of data used:	Training Records (HSE & HR) & Employee feedback forms Salary Slip of the project employees.

Means of verification/Comments:	PP has confirmed that total 13 trainings have been provided to their employees during current monitoring period and same has been verified by the training records submitted by the PP. Slaray paid to employees has been verified through salary slips submitted by PP.
Cross-check	The number of persons employed would be mentioned in the plant register, which is crossed checked with daily attendance register. Salary slip can be checked for earnings of female and male employees

3 SUSTAINABILITY VERIFICATION

The monitoring has been carried out in accordance with the GS sustainability monitoring plan contained in the registered PDD and annex. All the sustainability parameters were monitored and determined as per the Monitoring Plan.

3.1 Assessment of SDG outcomes for the current Monitoring period

SDG Indicator	SDG 7: Affordable and clean energy
Data Unit :	MWh/ year
Description :	Quantity of net electricity supplied to the grid.
Source of data used :	Generation statement provided by TANGEDCO every month.
Means of verification /comments :	Quantity of electricity supplied during current monitoring period is 261,563. Same has been verified with the JMR submitted by PP. Amount esimated in registered PDD: 117,122 MWh/Annually

SDG Indicator	SDG 13: Climate Action
Data Unit :	tCO ₂
Description :	Reduction in CO2 emission reduction due to implementation of project activity
Source of data used :	Calculated as per "Tool to calculate the emission factor for an electricity system,". The data are obtained from "CO2 Baseline Database for Indian Power Sector" version 15.0, published by the Central Electricity Authority, Ministry of Power, Government of India.
Means of verification /comments :	Estimated ER in the PDD was: 110,317 tCO ₂ /Annually ER achieved during current monitoring period is 246,366 tCO ₂ The above data has been checked from the JMR.



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SDG Indicator	SDG 8: Decent work and economic growth																																																								
Data Unit :	Number (employees) Number(Trainings) INR (salary)																																																								
Description :	Number of Trainings provided to employees & O&M staff Number of project employees Salary given to the employees of the project.																																																								
Source of data used :	Training Records (HSE & HR) & Employee feedback forms Salary Slip of the project employees																																																								
Means of verification /comments :	<p>Total 13 training has been given to the employees during current monitoring period. DOE has verified the training records for the same. VVB has crosschecked the details from the training records and found that for 2018 no training are there as only 2 months of 2018 are monitored, for 2019 ten trainings were conducted and for 2020 three trainings were conducted. The decrease in number of training from 2019 to 2020 is due to covid-19 outbreak.</p> <table border="1"> <thead> <tr> <th>S No</th> <th>Name of training</th> <th>No. of participants</th> <th>Date of training</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>LSSR & Defensive Training</td> <td>15</td> <td>26/06/2019</td> </tr> <tr> <td>2</td> <td>Electrical & LOTO training</td> <td>06</td> <td>16/06/2019</td> </tr> <tr> <td>3</td> <td>Fire Safety</td> <td>11</td> <td>25/07/2019</td> </tr> <tr> <td>4</td> <td>Module cleaning</td> <td>08</td> <td>23/07/2019</td> </tr> <tr> <td>5</td> <td>On site safety</td> <td>12</td> <td>22/07/2019</td> </tr> <tr> <td>6</td> <td>Personal Protective Equipment</td> <td>15</td> <td>24/07/2019</td> </tr> <tr> <td>7</td> <td>Hazardous chemicals workplace safety awareness</td> <td>16</td> <td>26/08/2019</td> </tr> <tr> <td>8</td> <td>Workplace at height</td> <td>13</td> <td>27/07/2019</td> </tr> <tr> <td>9</td> <td>Fire Safety Training</td> <td>15</td> <td>22/07/2019</td> </tr> <tr> <td>10</td> <td>Incident Communication training</td> <td>09</td> <td>30/07/2019</td> </tr> <tr> <td>11</td> <td>Safety training</td> <td>08</td> <td>20/10/2020</td> </tr> <tr> <td>12</td> <td>PPE training</td> <td>07</td> <td>07/11/2020</td> </tr> <tr> <td>13</td> <td>Training on incident reporting</td> <td>04</td> <td>10/12/2020</td> </tr> </tbody> </table> <p>Moreover, VVB has cross verified the prevailing average salary https://www.ambitionbox.com/salaries/galaxy-solar-energy-salaries/site-engineer VVB found salary paid by PP is above the industries standard. Also, the total investment done for the operation and maintainance of the</p>	S No	Name of training	No. of participants	Date of training	1	LSSR & Defensive Training	15	26/06/2019	2	Electrical & LOTO training	06	16/06/2019	3	Fire Safety	11	25/07/2019	4	Module cleaning	08	23/07/2019	5	On site safety	12	22/07/2019	6	Personal Protective Equipment	15	24/07/2019	7	Hazardous chemicals workplace safety awareness	16	26/08/2019	8	Workplace at height	13	27/07/2019	9	Fire Safety Training	15	22/07/2019	10	Incident Communication training	09	30/07/2019	11	Safety training	08	20/10/2020	12	PPE training	07	07/11/2020	13	Training on incident reporting	04	10/12/2020
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3	Fire Safety	11	25/07/2019																																																						
4	Module cleaning	08	23/07/2019																																																						
5	On site safety	12	22/07/2019																																																						
6	Personal Protective Equipment	15	24/07/2019																																																						
7	Hazardous chemicals workplace safety awareness	16	26/08/2019																																																						
8	Workplace at height	13	27/07/2019																																																						
9	Fire Safety Training	15	22/07/2019																																																						
10	Incident Communication training	09	30/07/2019																																																						
11	Safety training	08	20/10/2020																																																						
12	PPE training	07	07/11/2020																																																						
13	Training on incident reporting	04	10/12/2020																																																						



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	project activity sums up to be 2,18,39,000 INR for the current monitoring period. PP has submitted the declaration stating the same.
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The adequacy and compliance of the monitoring plan in the Monitoring report was found as per the requirements laid by the approved GS4GG PDD. The information flow (from data generation, aggregation, to recording, calculation and reporting) is already included under respective parameter above. The verification team has verified all the data and collected evidence as per the required monitoring frequency and found to be correct and appropriate meeting the requirements of the applied methodology and registered PDD. As a part of continuous feedback from stakeholders, the grievances register is being placed at site and is being continuously monitored and addressed through the grievances cell on regular basis and maintained in a register.

The project is renewable energy technology. The project does not involve generation of Hazardous and Non-hazardous Waste. The same has been crosschecked by VVB. A declaration stating “ the project activity does not involve manufacture, trade or release and use of hazardous and non-hazardous chemicals during the current monitoring period” has been submitted by the project owner. During the site visit VVB has found it to be accurate.

3.2 Assessment of Data and Calculation of Greenhouse Gas Emission Reductions

Means of verification	<p>Baseline Emissions for the amount of electricity supplied by project activity, BE_y is calculated as: Project emissions: Project Emissions, PE_y = 0 Emission reductions: Calculation of baseline emission is as follows;</p> $BE_y = EG_{PJ,y} \times EF_{grid,CM,y}$ <p>Where, BE_y = Baseline emissions in year y (t CO₂/yr) EG_{PJ,y} = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh/yr) EF_{grid,CM,y} = Combined margin CO₂ emission factor for grid connected power generation in year y calculated using the latest version of the “Tool to calculate the emission factor for an electricity system” (t CO₂/MWh). The amount of ERs generated year wise are as follows:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr style="background-color: #4f81bd; color: white;"> <th>Year</th> <th>VERs</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">2018</td> <td style="text-align: center;">18,188</td> </tr> <tr> <td style="text-align: center;">2019</td> <td style="text-align: center;">118,822</td> </tr> <tr> <td style="text-align: center;">2020</td> <td style="text-align: center;">109,356</td> </tr> </tbody> </table>	Year	VERs	2018	18,188	2019	118,822	2020	109,356
Year	VERs								
2018	18,188								
2019	118,822								
2020	109,356								
Findings	N/A								
Conclusion	As a result of verification of the ER calculation process, the assessment team confirmed that all the parameters required for the determination of the emission reductions have been included in the Monitoring report Version 01 & Monitoring report Version 03 and corresponding ER calculation spreadsheets and are consistent with the applied methodology ACM0002 version 20.0 and the monitoring plan contained in the registered PDD. The parameters are complete in this monitoring period.								



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Year	No of Jobs created	Training Information	
		No of Trainings	No of staffs attended
2018	11	-	
2019	11	LSSR & Defensive Training	15
		Electrical & LOTO training	06
		Fire Safety	11
		Module cleaning	08
		On site safety	12
		Personal Protective Equipment	15
		Hazardous chemicals workplace safety awareness	16
		Workplace at height	13
		Fire Safety Training	15
		Incident Communication training	09
		2020	11
PPE training	07		
Training on incident reporting	04		

4 VERIFICATION OPINION

TUV SUD South Asia has performed first verification of the emission reductions reported for the project activity “72 MWac Ramnad Solar Power Project by Ramnad Solar Power Limited at Tamil Nadu”, GS Reference No. 7080 for the period 26/10/2018 to 31/12/2020, with regard to the relevant GS4GG principles and requirements. The GSVERs issued for this monitoring period 26/10/2018 to 31/12/2020 is 246,366 tco₂. The project participants are responsible for the collection of data in accordance with the monitoring plan and the reporting emission reductions from the project.

It is TUV SUD’s responsibility to express an independent verification opinion on the reported emission reductions from the project and does not express any opinion on the selected baseline scenario or on



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the validated and registered PDD. Based on documented evidences and corroborated by an on-site assessment TUV SUD can confirm that:

- (i) the project has been implemented and operated as per the PDD;
- (ii) the monitoring report and other supporting documents provided are complete and verifiable and in accordance with the applicable GS4 GG principles and requirements;
- (iii) the monitoring is in place as per the applied baseline and monitoring methodology; (the monitoring complies with the monitoring plan;
- (iv) the monitoring plan in the PDD is as per the applied baseline and monitoring methodology.
- (v) Not legal contest or dispute that has arisen with the project during the monitoring period.

Annex 1:List of Findings

CL from this verification

CL ID	01	Section no.		Date: 04/08/2021
Description of CL				
<p>Generation data for the following months are missing:</p> <p>2018 – Oct to December</p> <p>2019 – July to Sept.</p> <p>2020 – Nov and December</p>				
Project participant response				Date: 17/08/2021
The Generation for the current monitoring period is hereby provided along with this submission to assement team.				
Documentation provided by project participant				
<p>Generation data for the following months:</p> <ol style="list-style-type: none"> 1. Oct-2018 to December-2018 2. July-2019 to Sept-2019 3. Nov-2020 and December-2020 				
DOE assessment				Date: 25/08/2021
Complete generation data is submitted. CL is closed				

CL ID	02	Section no.		Date: 04/08/2021
Description of CL				
<p>PP has to submit the following documents:</p> <ol style="list-style-type: none"> 1. Calibration details of meters 2. Training records for monitoring period 3. Sample Salary slips 4. Latest photographs of the site 5. HSE logbook for hazardous waste management 6. ERPA 				
Project participant response				Date: 17/08/2021
The Calibration certificate of energy meters, training records, sample salary pay slip, latest site photographs , HSE Logbook & ERPA document for this monitoring period is hereby provided along with this submissions to the assessment team.				
Documentation provided by project participant				
<ol style="list-style-type: none"> 1. Calibration details of meters 2. Training records for monitoring period 3. Sample Salary slips 4. Latest photographs of the site 5. HSE logbook for hazardous waste management 6. ERPA 				

DOE assessment	Date: 25/08/2021
All requested documents submitted for verification. CL is closed	

CL ID	03	Section no.	A.4	Date: 04/08/2021
Description of CL				
Section A.4, length of crediting period is not correct. Also mention the start and end date of crediting period.				

Project participant response				Date: 00/08/2021
Section A.4, length of crediting period has been rectified. The start and end date of crediting period has been added. Start date of crediting period is 26/10/2018 which is two years prior to design certificate as per as per section 10.2.1 of the Guideline GHG EMISSIONS REDUCTION & SEQUESTRATION PRODUCT REQUIREMENTS “ <i>The start date of Crediting Period is the date of start of operation (start of planting for A/R Projects) or a maximum of two years (three years for A/R & AGR) prior to the date of Project Design Certification, whichever occurs later</i> ”. The length of first Crediting period is 7 years which will be renewed twice totalling to length of crediting period of 15(7+7+1) years as per 6.3.1 of the Guideline GHG EMISSIONS REDUCTION & SEQUESTRATION PRODUCT REQUIREMENTS “ <i>The total duration of the crediting period shall not exceed the maximum crediting period allowed under relevant GS4GG activity requirements. It also includes the period that project or CPA has been issued emission reductions for under other standard.</i> ” The End date for first crediting period is 26/10/2025.				

Documentation provided by project participant				
Revised MR version 02				
DOE assessment				Date: 25/08/2021
Revised MR has been received. CL is closed				

CL ID	04	Section no.	E.5 and ER sheet	Date: 04/08/2021
Description of CL				
Value of numbers of trainings and employees are inconsistent in MR and ER sheet				
Project participant response				Date: 00/08/2021

Value of numbers of trainings and employees has been made consistent in MR and ER sheet. As a part of SDG 8.5.1: Decent Work and Economic Growth Number of Trainings provided to employees & O&M staff were 10 and the number of project employees that were employed in this monitoring period were 22.

year	No. of employees
2019	11
2020	11

Documentation provided by project participant				
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Revised MR version 02 Training records	
DOE assessment	Date: 25/08/2021
MR and ER has been made consistent. CL is closed.	

CAR from this verification

CAR ID	01	Section no.	D.2	Date: 04/08/2021
Description of CAR				
Numbers of energy meters are not consistent in the MR. PP has to mention the correct numbers and provide the calibration details in the MR.				
Project participant response				Date: 17/08/2021
Numbers of energy meters has been made consistent in the MR. The correct numbers and calibration details has been added to the MR. Projects activity comprises of installation of 6 Energy meters installed at the at project site, 3 Energy meters (1 main meter and 1 check meter, 1 standby meter) under control of PP and 3 Energy meters (1 main meter, 1 check meter, 1 standby meter) sealed and under control of TANGEDCO used for joint metering installed at interconnection point of the Grid at project site.				
Meter & Calibration Details:				
Details	Main Meter		Check Meter	
Meter Number	TNW01979		TNW01987	
Make	Secure		Secure	
Accuracy	0.2s		0.2s	
Last Calibration	20/07/2018		27/08/2018	
Calibration frequency	Once in 5 years as per CEA guidelines			
Documentation provided by project participant				
Revised MR version 02 Calibration certificate				
DOE assessment				Date: 25/08/2021
MR has been revised. CAR is closed				

CAR ID	02	Section no.	MR & ER	Date: 04/08/2021
Description of CAR				
Net generation and baseline emission is inconsistent through out the MR and also not consistent with ER.				
Project participant response				Date: 17/08/2021
Net generation and baseline emission has been made consistent through out the MR with ER. The Net generation is 261,563 MWh and baseline emission is 246,366 tCO _{2e}				
Documentation provided by project participant				
ER sheet version 2 Revised MR version 2				

DOE assessment	Date: 25/08/2021
MR and ER sheet has been made consistent. CAR is closed.	

FAR from this verification

NA.

Annex 2

Information Reference List

REF. NO.	Author/Editor/ Issuer	Title/Type of Document. Publication place	Issuance and/or submission date (dd/mm/yyyy)	Additional Information (Relevance in CDM Context)
1.	AGEL	GS 7080 Revised PDD version 5	01/11/2020	
2.	AGEL	GS 7080 Monitoring Report version 01	23/06/2021	
3.	AGEL	GS 7080 Monitoring Report version 03	31/08/2021	
4.	Gold Standard	GS 7080 project page		
5.	AGEL	GS 7080 ER calculation sheet version 01	23/06/2021	
6.	AGEL	GS 7080 ER calculation sheet version 03	31/08/2021	
7.	AGEL	Field data sheets for ER and SDG monitoring	2018-2020	
8.	AGEL	Employees log book record	2018-2020	
9.	AGEL	Sample salary slips of employees	2018-2020	
10.	AGEL	List of Employees	2018-2020	
11.	AGEL	Training records	2018-2020	
12.	AGEL	Grievance register	2018-2020	
13.	AGEL	Calibration certificates	27/08/2018	
14.	AGEL	GS 7080 Monitoring Report version 05	07/06/2022	
15.	AGEL	JMR & Invoice	2018-2020	
16.	AGEL	Transition review final PDF	16/03/2022	
17.	AGEL	GS Validation report Version 03	06/11/2020	
18.	AGEL	7080 design review final PDF	29/11/2020	
19.	UNFCCC	CDM webpage https://cdm.unfccc.int/Projects/DB/Appendix/plus1595925633.68/view		
20.	AGEL	CDM PDD version 05	10/07/2020	
21.	AGEL	CDM Validation report 03	23/07/2020	
22.	AGEL	Training records 2020	2020	



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Annex 3

Appointment Certificates



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CERTIFICATE OF APPOINTMENT

Mr. Murty, Eswar fulfills the requirements of the Certification Body 'Environment and Energy' of TUV SUD South Asia Pvt Ltd to participate in audits.

Qualification applicable to					
Standard	CDM	GS	VCS	ISO-14064-1, 2	Other
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Qualification as						
Status	Validator	Verifier	ATL	Technical Reviewer	Financial Expert	Technical Expert
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
TA (s)	1.1, 1.2, 3.1, 4.1, 13.1					


Country Expertise						
Region	1	2	3	4	5	Other
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Further countries	India, Indonesia					

Technical Area/ Scopes
1.1_Thermal Energy Generation
1.2_Renewables
3.1_Energy demand
4.1_Cement and lime production, General Manufacturing (physical and chemical incl construction (GHG), General (GHG)
13.1_Waste handling and disposal (GHG)
Power generation and Electrical power transactions(renewable/nonrenewable-(GHG)

This appointment is valid until 31.05.2022 and is bound by internal requirements of the Certification Body 'Environment and Energy' of TUV SUD South Asia Pvt Ltd.

In case of loss of validity of this certificate as per result of an assessment according to internal procedures or due to any other reason, it will be properly communicated to you.

Your Certificate has the internal reference no. CB-IND-CCP-0031/012.

Date	Signature
01/06/2021	

IS-CMS-CB-POG-01/05, version 03

ZERTIFIKAT ◆ CERTIFICATE ◆ 認証証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT



CERTIFICATE OF APPOINTMENT

Mr. Kewat, Shailendra fulfills the requirements of the Certification Body 'Environment and Energy' of TÜV SÜD South Asia Pvt Ltd to participate in audits.

Qualification applicable to					
Standard	CDM	GS	VCS	ISO-14064-1, 2	Other
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Qualification as						
Status	Validator	Verifier	ATL	Technical Reviewer	Financial Expert	Technical Expert
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
TA (s)	1.2, 3.1, 5.1, 13.1					

Country Expertise						
Region	1	2	3	4	5	Other
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Further countries	India, South Africa					

Technical Area/ Scopes	
1.2_Renewables	
3.1_Energy Demand (GHG)	
5.1_Chemical Industries	
13.1_Waste handling and disposal (GHG)	
Power generation and Electrical power transactions(renewable/nonrenewable-(GHG)	

This appointment is valid until 30.09.2022 and is bound by internal requirements of the Certification Body 'Environment and Energy' of TÜV SÜD South Asia Pvt Ltd.

In case of loss of validity of this certificate as per result of an assessment according to internal procedures or due to any other reason, it will be properly communicated to you.

Your Certificate has the internal reference no. CB-IND-CCP-0105/003.

Date	Signature
01/10/2021	

IS-CMS-CB-POG-01/05, version 03