Gold Standard for Global Goals Verification Report

GOLD STANDARD VERIFICATION OF
GS PROJECT NO. (GS-7533)

100 MW Solar Power plant in Maharashtra

Report No. 1010025SK

12 June 2022

TÜV SÜD South Asia Pvt. Ltd.
Solitaire, I.T.I. Road, Aundh
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South Asia

<table>
<tr><td>Title of the project activity</td><td>100 MW Solar Power plant in Maharashtra</td></tr>
<tr><td>GS Reference number of the project activity</td><td>GS 7533</td></tr>
<tr><td>Version number of the verification and certification report</td><td>4.0</td></tr>
<tr><td>Completion date of the verification and certification report</td><td>26/08/2022</td></tr>
<tr><td>Monitoring period number and duration of this monitoring period</td><td>01/07/2021 to 31/12/2021</td></tr>
<tr><td>Version number of monitoring report to which this report applies</td><td>02</td></tr>
<tr><td>Crediting period of the project activity corresponding to this monitoring period</td><td>30/12/2019 to 29/12/2024</td></tr>
<tr><td>Project participant(s)</td><td>Juniper Green Energy Pvt Ltd
Nisagra Renewable Energy Pvt Ltd</td></tr>
<tr><td>Host Party</td><td>India</td></tr>
<tr><td>Sectoral scope(s)</td><td>1</td></tr>
<tr><td>Methodology (ies)</td><td>ACM0002 “Grid-connected electricity generation from renewable sources” Version 20.0</td></tr>
<tr><td>Estimated amount of annual average certified SDG impact (as per approved PDD)</td><td>224,617 $tCO2_e$</td></tr>
<tr><td>Certified GHG emission reductions or net anthropogenic GHG removals for this monitoring period</td><td>90,619 $tCO2_e$
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<tr><th>Year</th><th>Emission Reductions (tCO_2)</th></tr>
<tr><td>01/07/2021 to 31/12/2021</td><td>90,619</td></tr>
<tr><td>Total</td><td>90,619</td></tr>
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<tr><td>Name of DOE</td><td>TUV SUD South Asia Pvt Ltd (E-0005)</td></tr>
<tr><td>Name, position and signature of the approver of the verification and certification report</td><td>Eswar Murty, Sr. Manager
Certification Body, TUV SUD South Asia Pvt Ltd</td></tr>
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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 v3.0
- 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 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	☒	☒	☒	☒

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	Shende	Milind	TUV SUD South Asia

1.5 Review of Documents

The Monitoring Report version 02 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 on Shirpur site was inspected on 21/03/2022 and Mukti site on 22/03/2022 and 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, local employees and local villagers it was confirmed that the project is greenfield renewable energy project. The local employees of the other project site were informed and invited verbally. All the local and appeared stakeholders were interviewed and discussed of grievance existed. The meeting closed on positive note. Thus, the baseline scenario is in compliance with the requirements of the methodology.

Duration of Audit & Interviews				
No.	**Activity performed on-site**	**Site location**	**Date**	**Team member**
1.	During the on-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.	Shirpur village, Dhule	21/03/2022	Shailendra Kewat
2	During the on-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.	Mukti Village, Dhule	22/03/2022	Shailendra Kewat

Interviews (21/03/2022)

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1	K.	Sangamesh	Site-Incharge	21/03/2022	Monitoring and project imple-mentation and SDG parame-ters	Shailendra Kewat
2	Vyas	Anshul	Consultant	21/03/2022	Monitoring, sam-pling,project implementation and ER calcu-lations	Shailendra Kewat
3	-	Chandresh	Site Engi-neer	21/03/2022	Monitoring and project imple-mentation	Shailendra Kewat
4	-	Shiva	Villager	21/03/2022	Issues re-lated to ef-fect of pro-ject imple-mentation	Shailendra Kewat
5	P	Drishith	Villager	21/03/2022	Issues re-lated to ef-fect of pro-ject imple-mentation	Shailendra Kewat
6	Krishna	Surya	Villager	21/03/2022	Issues re-lated to ef-fect of pro-ject imple-mentation	Shailendra Kewat
7	P. Raju	Murli	Villager	21/03/2022	Issues re-lated to ef-fect of pro-ject imple-mentation	Shailendra Kewat
8	K, Maouli	Chandra	Villager	21/03/2022	Issues re-lated to ef-fect of pro-ject imple-mentation	Shailendra Kewat

Interviews (22/03/2022)

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1	Singh	Sumer	Site-Incharge	22/03/2022	Monitoring and project implementation and SDG parameters	Shailendra Kewat
2	Vyas	Anshul	Consultant	22/03/2022	Monitoring, sampling,project implementation and ER calculations	Shailendra Kewat
3	Pendor	Amrit	Site Engineer	22/03/2022	Monitoring and project implementation	Shailendra Kewat
4	-	Shorya Bhaiya	Driver	22/03/2022	Issues related to project operation	Shailendra Kewat
5	-	Mangal	Driver	22/03/2022	Issues related to project operation	Shailendra Kewat
6	Kalhapure	Babulal	Villager	22/03/2022	Issues related to project operation	Shailendra Kewat
7	Gaikwad	Rahul	MSEDCL offical	22/03/2022	Issues related to project operation	Shailendra Kewat
8	-	Ganesh	Electrician	22/03/2022	Issues related to project operation	Shailendra Kewat

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. 4 CARs, 3 CR 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”.

South Asia

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 Validation. This is 3rd periodic verification for the project activity.

1 FAR was raised by Sustaincert team during previous Verification and addressed by the assessment team during site visit dated 21/03/2022 at Shirpur and 22/03/2022 at Mukti village, Dhule district in Maharashtra. Relevant monitoring procedures were checked and confirmed that the implementation of monitoring system is in line with the requirements. GSVVB has interviewed with discom officials and confirms the SDG7 requirements, and interacted with number of employees, training records and employee feedback forms with respect to SDG8 requirements.

GSVVB reviewed the supportive documents regarding SDG-7, SDG-8 provided by PP and found that documents to be correct. Also, the grievance register is being placed at site and monitored. The same has been cross checked.

2.2 Project Implementation in accordance with the registered PDD

The project activity aims to harness solar energy through the installation of PV with a total installed capacity of 100 MWac (corresponding to 145 MW_P). The solar PV power plant have solar PV modules, inverters, transformers and other protection system and supporting components.

The crediting period starts from 30/12/2019 to 29/12/2024, 5 years. Therefore, the monitoring period of the project activity is 01/07/2021 to 31/12/2021.

The project has not been registered under any other GHG and/or Renewable/Green Energy programs. Also, the Project is not rejected by other GHG programs. A declaration for the same is checked and found correct by the assessment team. Also, the assessment team checked the following registries to confirm the same. The details of the registries checked are as follows:

1. http://cdm.unfccc.int/
2. https://verra.org/
3. https://www.globalcarboncouncil.com
4. https://www.irecstandard.org
5. https://biocarbonregistry.com/en/
6. https://ji.unfccc.int/index.html
7. https://carbonregistry.com/

The Project has no intend to generate any other form of GHG-related environmental credit for GHG emission reductions or removals claimed under the GS Program.

The Projects has been located in various villages of Nashik, Jalgaon & Dhule districts in Maharashtra state of India.

Project Investors' Name	Capacity in MW	Village	District	Latitude	Longitude
Nisagra Renewable Energy Pvt. Ltd.	10 MW	Indave, Sindhkheda	Dhule	20° 19'59.009" N	74° 40' 13.13" E
	10 MW	Varul, Shirpur	Dhule	21° 24' 25.565" N	74° 44' 15.691" E
	10 MW	Chhail, Sakri	Dhule	20° 53' 44.233" N	74° 16' 26.768" E
	10 MW	Mukti	Dhule	20° 52' 19.656" N	74° 56' 42.761" E
	10 MW	Bahirane, Baglan (Satana)	Nashik	20° 35' 56.762" N	74° 12' 7.588" E
Juniper Green Energy Pvt. Ltd.	10 MW	Dahidi, Malegaon	Nashik	20° 42' 37.157" N	74° 33' 29.097" E
	10 MW	Vichkheda, Parola	Jalgaon	20° 53' 60" N	75° 5' 59.999" E
Nisagra Renewable Energy Pvt. Ltd.	10 MW	Vahelgaon, Nandgaon	Nashik	20° 25' 23.7" N	74° 16' 49.7" E
	10 MW	Rajapur, Yeola	Nashik	20° 2' 58.1280" N	74° 29' 11.8248"E
Juniper Green Energy Pvt. Ltd.	10 MW	Dahiwad, Deola	Nashik	20° 25' 12.110" N	74° 17' 59.999" E

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			
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	1		

monitoring plan			
Compliance with the calibration frequency requirements for measuring instruments		1	
Assessment of data and calculation of emission reductions or net removals		2	
Others (Assessment of SDG outcomes)		1	
Total	3	4	0

2.5 Compliance of the Monitoring Plan with the Methodology

During the document review and furthermore during the physical audit, 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:

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:	Generation statement provided by MSEDCL every month.
Means of verification/Comments:	This value has been verified with the JMR and cross-checked with the invoice raised by PP. Data will be recorded from the energy meters. Calibration frequency of these meters are once in 5 years as per CEA guidelines.
Cross-check	Quantity of net electricity supplied to the grid will be cross checked with the Invoices/ Monthly Bill raised by the Project Participant to MSEDCL..

Data / Parameter:	Air quality
Data unit:	tCO2
Description:	Reduction in CO_2 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 14.0, published by the Central Electricity Authority, Ministry of Power, and Government of India.
Means of verifica-	Emission reduction calculated in line with applied methodology and

tion/Comments:	registered PDD. 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 (training) INR (Salary)
Description:	Number of Trainings provided to employees & O&M staff Salary given to the employees of the project. The income to all the unskilled workers are made on day to day basis in line with the minimum wage requirements. Annual records of income paid to all the employees would be available.
Source of data used:	Training Records (HSE & HR) Salary Slip of the project employees.
Means of verification/Comments:	PP has confirmed that total 20 trainings have been provided to their employees during current monitoring period.
Cross-check	Salary slip can be checked for earnings of employees The trainings held can be crosschecked with the training documents maintained at site.

Data / Parameter:	Quantitative 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:	Plant employment records
Means of verification/Comments:	The number of persons employed has been verified with the daily log book records. Slaray paid to employees has been verified through salary slips submitted by PP.
Cross-check	The number of persons employed are 44 and would be mentioned in the plant register, which can be crossed checked with daily attendance register.

Calibration details of the energy meters:

Project Proponent	Sr. No	Location	Main Meter	Check Meter	Calibration Date	Calibration Due date
Nisagra Renewable Energy Pvt.	1	Indave – (5 MW -BAY1)	2872718	2872719	05/12/2019	04/12/2024
		Indave - (5	2872736	2872737	05/12/2019	04/12/2024

Ltd.		MW -BAY2)				
	2	Varul – (5 MW -BAY1)	2872720	2872721	05/12/2019	04/12/2024
		Varul - (5 MW -BAY2)	2872722	2872723	05/12/2019	04/12/2024
	3	Sakri – (5 MW - BAY1)	2872724	2872725	05/12/2019	04/12/2024
		Sakri - (5 MW - BAY2)	2872726	2872727	05/12/2019	04/12/2024
	4	Mukti – (5 MW -BAY1)	2872728	2872729	05/12/2019	04/12/2024
		Mukti - (5 MW -BAY2)	2874871	2874872	05/12/2019	04/12/2024
	5	Bahirane – (5 MW -BAY1)	2872741	2874840	31/12/2019	30/12/2024
		Bahirane - (5 MW -BAY2)	2874845	2872643	31/12/2019	30/12/2024
	6	Dahidi – (5 MW -BAY1)	2874788	2868876	31/12/2019	30/12/2024
		Dahidi - (5 MW -BAY2)	2872626	2872742	31/12/2019	30/12/2024
	7	Parola – (5 MW -BAY1)	2892219	2892218	17/01/2020	16/01/2025
		Parola - (5 MW -BAY2)	2892222	2892221	17/01/2020	16/01/2025
Juniper Green Energy Pvt. Ltd.	8	Vahelgaon – (5 MW -BAY1)	2892214	2892211	06/01/2020	05/01/2025
		Vahalgaon - (5 MW -BAY2)	2892215	2892228	06/01/2020	05/01/2025
	9	Rajapur – (5 MW -BAY1)	2892216	2892213	06/01/2020	05/01/2025
		Rajapur - (5 MW -BAY2)	2892226	2892227	06/01/2020	05/01/2025
	10	Dahiwad – (5 MW -BAY1)	2892231	2892230	17/01/2020	16/01/2025
		Dahiwad - (5 MW -BAY2)	2892234	2892233	17/01/2020	16/01/2025

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
Description :	Quanity of net electricity supplied to the grid.
Source of data used :	Generation statement provided by MSEDCL every month.
Means of verification /comments :	Quantity of electricity supplied during current monitoring period is 96,733 MWh. Same has been verified with the JMR submitted by PP. Amount esimated in registered PDD: 239,771 MWh/Annually

SDG Indicator	SDG 13: Climate Action
Data Unit :	tCO_2/year
Description :	Reduction in CO_2 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 14.0, published by the Central Electricity Authority, Ministry of Power, and Government of India.
Means of verification /comments :	Estimated ER in the PDD was: 224,617 tCO2/Annually ER achieved during current monitoring period is: Year — Emission reduction acheived in tCO2 01/07/2021 to 31/12/2021 — 90,619 Total — 90,619 The above data has been checked from the JMR.

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 with Number of male/female, permanent/temporary, age and person with disabilities. Salary given to the employees of the project.
Source of data used :	Training Records (HSE & HR) Plant employment records Salary Slip of the project employees
Means of verification /comments :	Total 20 training has been given to 44 employees during current monitoring period. DOE has verified the training records for the same.

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.

3.2 Assessment of Data and Calculation of Greenhouse Gas Emission Reductions

Means of verification	Baseline Emissions for the amount of electricity supplied by project activity, BEy is calculated as: Project emissions: Project Emissions, PEy = 0 Emission reductions: Calculation of baseline emission is as follows; BEy $= EG_{PJ,y} \times EF_{CM,y}$ = 96,733 * 0.9368 = 90,619 tCO_2e (Round down value) Where, BE_y = Baseline emissions in year y ($t\ CO_2/yr$) $EG_{PJ,y}$ = Net Quantity of Electricity exported (MWh/yr) $EF_{CM,y}$ = grid emission factor, i.e., 0.9368 $t\ CO_2/MWh$ (it has been fixed ex-ante)
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 and 02 corresponding ER calculation spreadsheets and are consistent with the applied methodology ACM0002 version 19.0 and the monitoring plan contained in the registered PDD. The parameters are complete in this monitoring period.

4 EMISSION REDUCTIONS AND SDG IMPACTS

AS per ACM0002 (Version 19.0), the baseline emissions are to be calculated as follows:
$BE_y = EG_{PJ,y} * EF_{grid,CM,y}$
Where:
$\boldsymbol{BE_y}$ **=** Baseline emissions in year *y* (tCO2/yr)
$\boldsymbol{EG_{PJ,y}}$ **=** 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)
$\boldsymbol{EF_{grid,CM,y}}$ **=** Combined margin CO2 emission factor for grid connected power generation in year *y* calculated using the latest version of "TOOL07: Tool to calculate the emission factor for an electricity system" (tCO2/MWh)

No project emission through the renewable project electricity generation.
The total emission reduction by project activity is 90,619 tCO2 during this monitoring period.

SDG 7 – Affordable & Clean Energy
The project activity has the capacity to produce 239,771 MWh per annum. The total affordable and clean energy generated by project activity is 96,733 MWh during this monitoring period.

SDG 8 – Decent work & Economic Growth

The project activity has provided employment opportunities to 44 nos. In addition, providing regular training (minimum 1 training per annum) to the employees for improving their skills.
Summary of SDG 8 impact are as follows:

Year	No of Jobs created	Training Information	
		Name of Trainings	No of staffs attended
2021	44	First-Aid Mobile APP. Training.	3
		First-Aid Mobile APP. & 5s and Kai-zen Training.	3
		First-Aid Mobile APP. & 5s and Kai-zen Training.	3
		Snake Bite awareness session and First Aid.	4
		First-Aid Mobile APP. & 5s and Kai-zen Training.	5
		First-Aid Mobile APP. & 5s and Kai-zen Training.	4
		PPE Awareness & 5s and Kai-zen	3

		Training.	
		First-Aid Mobile APP. & 5s and Kai-zen Training.	3
		First-Aid Mobile APP. & 5s and Kai-zen Training.	3
		Basic of fire safety	11
		First-Aid Mobile APP. & 5s and Kai-zen Training.	3
		First-Aid Mobile APP. & 5s and Kai-zen Training.	3
		Snake Bite awareness session and First Aid.	5
		First-Aid Mobile APP. & 5s and Kai-zen Training.	4
		First-Aid Mobile APP. & 5s and Kai-zen Training.	4
		Snake Bite awareness session and First Aid.	5
		First-Aid Mobile APP. & 5s and Kai-zen Training.	4
		First-Aid Mobile APP. & 5s and Kai-zen Training.	3
		First-Aid Mobile APP. & 5s and Kai-zen Training.	4
		First-Aid Mobile APP. & 5s and Kai-zen Training.	6

5 VERIFICATION OPINION

TUV SUD South Asia has performed third verification of the emission reductions reported for the project activity “100 MW Solar Power plant in Maharashtra.”, GS Reference No. 7533 for the period 01/07/2021 to 31/12/2021, with regard to the relevant GS4GG principles and requirements. 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 the validated and registered PDD. Based on documented evidences and corroborated by an on-site assessment TUV SUD can confirm that:

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 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; (iv) the monitoring complies with the monitoring plan;

(iv) the monitoring plan in the PDD is as per the applied baseline and monitoring methodology.

Annex 1:List of Findings

Table 1. CL from this verification

CL ID	01	**Section no.**	A.4	**Date:**24/04/2022
Description of CL				
Generation reports for the monitoring period has not been submitted				
Project participant response				**Date:** 27/04/2022
JMR and Invoices are submitted herewith				
Documentation provided by project participant				
1.JMR 2.Invoices				
DOE assessment				**Date:** 12/06/2022
JMR and Invoices submitted. CL is closed				

CL ID	02	**Section no.**		**Date:** 24/04/2022
Description of CL				
PP has to submit the following documents: 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				**Date27/04/2022**
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.				
Documentation provided by project participant				
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:** 12/06/2022
Requested documents are submitted for the assessment. CL is closed	

CL ID	03	**Section no.**	E.5 and ER sheet	**Date:** 24/04/2022
Description of CL				
Values for the SDG 8 are incomplete through out the MR				
Project participant response				**Date:** 27/04/2022
The values for the SDG 8 is added in the Revised MR Version 02				
Documentation provided by project participant				
Revised MR Version 02				
DOE assessment				**Date:** 12/06/2022
Revised MR received. CL is closed				

Table 2. CAR from this verification

CAR ID	01	**Section no.**	A.1	**Date:** 24/04/2022
Description of CAR				
Section A.1 mentions about Annex-2 and 3 however, there are no annexs to the MR				
Project participant response				**Date:** 27/04/2022
This has been corrected in Revised MR Version 02				
Documentation provided by project participant				
Revised MR Version 02				
DOE assessment				**Date:** 12/06/2022
Revised MR received. CAR is closed				

CAR ID	02	**Section no.**	A.4	**Date:** 24/04/2022
Description of CAR				
Start and end date of crediting period is missing				
Project participant response				**Date:** 27/04/2022
Start and end date of crediting period is updated in Revised MR version 02				
Documentation provided by project participant				
Revised MR Version 02				

DOE assessment	Date: 12/06/2022
Revised MR received. CAR is closed	

CAR ID	03	Section no.	E.2	Date: 24/04/2022
Description of CAR				
Explaination for impact of each SDG is missing in the section E.2				
Project participant response				**Date:** 27/04/2022
The SDG impact is added in section E.2 in revised MR Version 02				
Documentation provided by project participant				
Revised MR Version 02				
DOE assessment				**Date:** 12/06/2022
Revised MR received. CAR is closed				

CAR ID	04	Section no.	E.5	Date: 24/04/2022
Description of CAR				
Estimated value of the ERs for the monitoring period is not consistent.				
Project participant response				**Date:** 27/04/2022
Estimated Value of ERs is made consistent in the revised MR Version 02.				
Documentation provided by project participant				
Revised MR version 02.				
DOE assessment				**Date:** 12/06/2022
Revised MR received. CAR is closed				

Table 3. 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.	Juniper Green Energy Pvt Ltd Nisagra Renewable Energy Pvt Ltd	GS PDD version 5.0	08/10/2021	
2.	Juniper Green Energy Pvt Ltd Nisagra Renewable Energy Pvt Ltd	ER Sheet	08/10/2021	
3.	Juniper Green Energy Pvt Ltd Nisagra Renewable Energy Pvt Ltd	MR ver : 02	27/04/2022	
4.	Juniper Green Energy Pvt Ltd Nisagra Renewable Energy Pvt Ltd	ER sheet Ver : 02	27/04/2022	
5.	Juniper Green Energy Pvt Ltd Nisagra Renewable Energy Pvt Ltd Mukhyamantri Sour Krishi Vahini Yojana’	Commissioning Certificate		
6.	Juniper Green Energy Pvt Ltd Nisagra Renewable Energy Pvt Ltd	Grievance Register	01/07/2021 to 31/12/2021	
7.	Juniper Green Energy Pvt Ltd Nisagra Renewable Energy Pvt Ltd	JMR & Invoice	01/07/2021 to 31/12/2021	
8.	Juniper Green Energy Pvt Ltd Nisagra Renewable Energy Pvt Ltd	Training Documet	01/07/2021 to 31/12/2021	
9.	Juniper Green Energy Pvt Ltd Nisagra Renewable Energy Pvt Ltd	Pay slips	01/07/2021 to 31/12/2021	
10.	Juniper Green Energy Pvt Ltd Nisagra Renewable Energy Pvt Ltd	HSE Logbook		
11.	Juniper Green Energy Pvt Ltd Nisagra Renewable Energy & Pvt Ltd & Buyer	ERPA		

Annex 3

Appointment Certificates

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

TÜV SÜD South Asia

CERTIFICATE OF APPOINTMENT

Mr. Murty, Eswar fulfils 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: 2006	Other
	☒	☒	☒	☒	☐

Qualification as						
Status	Validator	Verifier	ATL	Technical Reviewer	Financial Expert	Technical Expert
	☒	☒	☒	☒	☒	☒
TA (s)	1.1, 1.2, 3.1, 4.1, 13.1					

Country Expertise						
Region	1	2	3	4	5	Other
	☒	☐	☐	☐	☐	
Further countries						

Technical Area
1.1_Thermal Energy Generation
1.2_Renewables
3.1_Energy demand
4.1_Cement and lime production
13.1_Solid waste and wastewater

This appointment is valid until 31.05.2021 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-0031/011.

Date	Signature
01/06/2020	

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

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South Asia

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: 2006	Other
	☒	☒	☒	☒	☐

Qualification as						
Status	Validator	Verifier	ATL	Technical Reviewer	Financial Expert	Technical Expert
	☒	☒	☒	☐	☒	☒
TA (s)	1.2, 3.1, 5.1, 13.1					

Country Expertise						
Region	1	2	3	4	5	Other
	☒	☐	☐	☐	☐	
Further countries						

Technical Area
1.2_Renewables
3.1_Energy Demand
5.1_Chemical Industries
13.1_Solid waste and waste water

This appointment is valid until 31.05.2021 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-0105/001.

Date	Signature
01/06/2020	

IS-CMS-CB-POG-01/06, version 03

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